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# RUDIMENTS
OF
# ANCIENT ARCHITECTURE,

CONTAINING

An Hiſtorical Account of the FIVE ORDERS, with their Proportions, and Examples of each from ANTIQUES;

ALSO

Extracts from VITRUVIUS, PLINY, &c. relative to the Buildings of the ANCIENTS.

Calculated for the Uſe of thoſe who wiſh to attain a ſummary Knowledge of the SCIENCE of ARCHITECTURE.

WITH

## A DICTIONARY OF TERMS.

ILLUSTRATED WITH ELEVEN PLATES.

THE SECOND EDITION, MUCH ENLARGED.

LONDON:

Printed for I. and J. TAYLOR, at the ARCHITECTURAL LIBRARY, HOLBORN.

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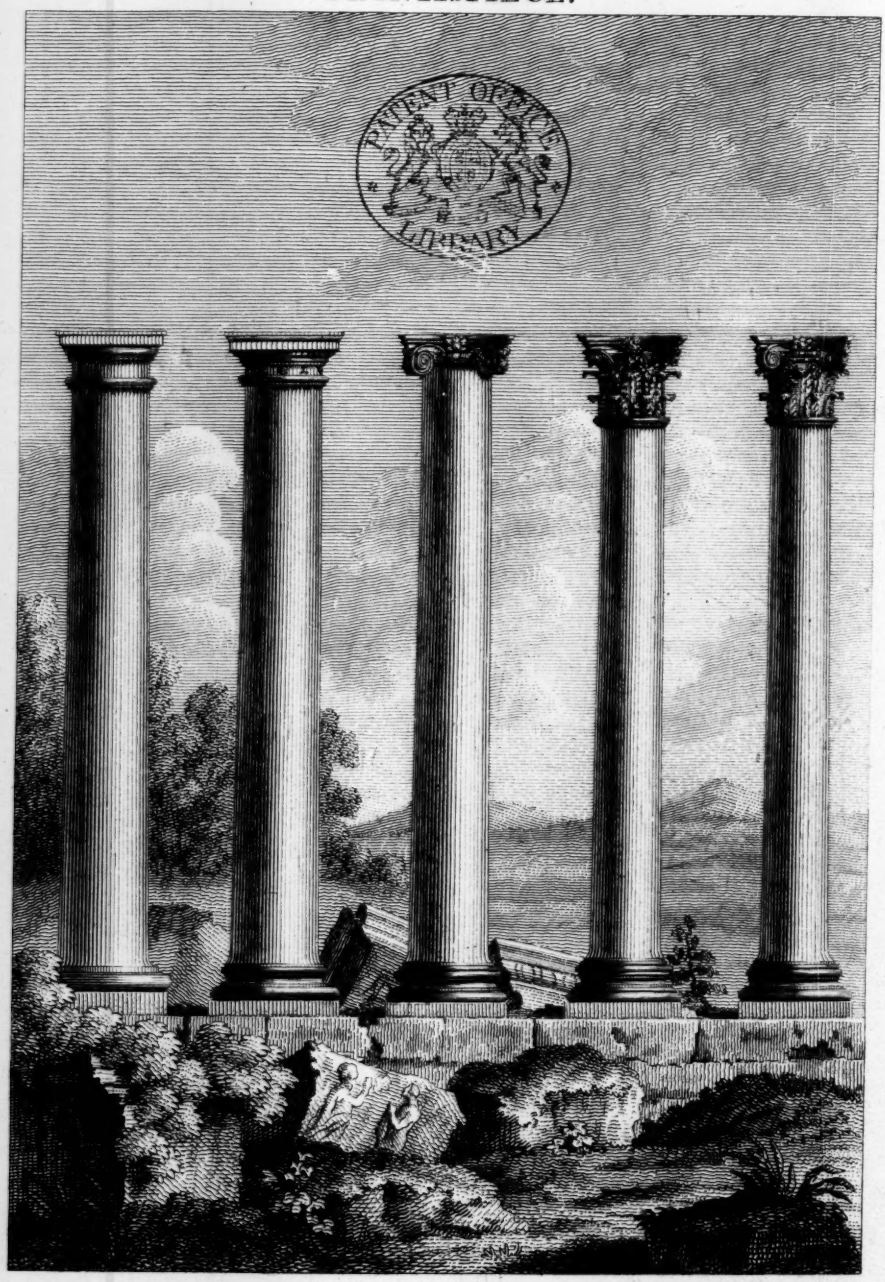


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# PREFACE

TO THE

SECOND EDITION.

PUBLIC approbation having made a ſecond edition of this little work neceſſary, the opportunity has been embraced, to make ſuch additions as would tend to complete the original deſign of the book.

The hiſtory of the progreſs of Architecture, and of the five orders, is conſiderably augmented, and will, it is hoped, be found a pretty accurate ſketch of the ſubject. The deſcrip-

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*ſpecularis*, a ſpecies of talc, according to Pliny's natural hiſtory; which eaſily ſplitting into thin tranſparent plates or lamina, was fit for the purpoſe: it has a ſimilar application now, for objects to be viewed by the microſcope.

I ſhall here ſuggeſt, becauſe I think the text did not warrant the tranſlation, that the ſleeping room and apartments deſcribed by Pliny, (page 74) as free from noiſe or other diſturbance, were moſt likely the rooms occupied by himſelf, and were what we ſhould call the maſter's apartments: the conveniences and ſituation of which appear fully to authoriſe his partiality to them.

To the dictionary, beſides many other articles, is added, an accurate ich-

tion of the Greek and Roman houſes, and villas, has never before been collected into one point of view; as the ſubject is intereſting, it will be entertaining, perhaps uſeful. Reſpecting the tranſlation, or rather explanation, of the ſeveral names of apartments, &c. it muſt be obſerved, the terms are now become obſolete, and from whatever is mere deſcription every man will conjecture according to his own fancy.

It may be proper to explain here, a ſeeming contradiction reſpecting the glazed windows of the ancients, having aſſerted, p. 68 "glaſs for windows "was then unknown," and ſoon after Pliny mentions the glazed windows of the portico of the *atrium*: The ſubſtance uſed by the ancients for this purpoſe was not glaſs, ſimilar to what is now uſed, but a ſtone called *lapis ſpe-*

# PREFACE.

CUSTOM has eſtabliſhed the neceſſity of a preface, which may alſo be conſidered as a privilege, authors enjoying therein liberty to explain, and plead for their labours. Much pleading I am not qualified for, nor perhaps entitled to; I therefore ſubmit to the candor of thoſe, who, by the purchaſe and peruſal of this work, have ſome claim to paſs judgement upon it: the great difference between a perfect work and a good intent, encourages me to explain.

ARCHITECTURE, as a liberal ſcience, and conſidered as connected with the ſtudy of antiquities, is a ſubject on which

ichnographical deſcription of the moſt celebrated Greek and Roman ſtructures; to render which completely uſeful, the proper names of parts are retained, and printed in italics: for this part of the work I have been under the neceſſity of conſulting many authors, and there is no point of any conſequence on which I have not examined moſt of the books on the ſubject. This part therefore, as it may be relied upon for its accuracy, will, I am perſuaded, meet with reſpect.

To this edition is added a plate of the modern Ionic capital, according to Scammozzi.

Upon the whole, I venture a ſecond time, before the public chearfully; the approbation already experienced, leading me to hope favourably of the future.

ſtand the productions of ſcientific writers, required an exertion of attention mere amuſement ſtartled at; however, at laſt activity was rouſed by the inconvenience of ignorance, and fortunately meeting with Sir W. CHAMBERS's excellent treatiſe, the path was conſiderably ſmoothened, and trod with greater pleaſure than at firſt I expected: from this and other books I was afterwards induced to examine, the following ſheets may be conſidered as notes or minutes, of what is neceſſary to be known by one, whoſe deſire, as mine was, is rather general information, than of the minutiæ of the ſcience.—In this view, I hope there will be found ſufficient to give a tolerably preciſe idea of the five orders and their ſeveral parts; the engravings exhibit their general effect, and are ſelected from antiques which have ever been

which every perſon of taſte and reading, at ſome time or other, has occaſion for information; yet that preciſion in rules neceſſary to a profeſſional man, is not the kind of knowledge wanted; but ſomething more general which will not fatigue the mind to underſtand, or burthen the memory to recollect. Under this impreſſion, I make public what was originally deſigned for mere amuſement.

The guide I followed in ſelecting and illuſtrating, was, a recollection of the wants I formerly felt, when deſirous of a general knowledge of Architecture. Many treatiſes there are on the ſubject; but as I chiefly ſought amuſement, the ſight of large and intricate works damped the ardour of enquiry, and more than once repelled the thirſt of knowledge. To underſtand

at the beginning of the ſcience, I have tranſlated from Vitruvius, what his excellent pen has recorded, as the rules of the ancients in building their edifices, or temples, the diſtribution of columns, and their diminutions. Theſe will, I hope, alſo be found uſeful to travellers who viſit the remains of ancient architectural ſplendor and magnificence; as in a pocket volume they will have examples of the five orders, with the laws obſerved by the ancients in the great outline of their public ſtructures, by what name and character each order of building is diſtinguiſhed, with rules for adjuſting the columns; from which, an edifice, though in ruins, may, with conſiderable certainty, be reſtored to its original form.

I HAVE alſo added a Dictionary, or explanation of terms uſed by artiſts, to expreſs the ſeveral parts of buildings; this

been reſpected for their proportion and elegance: theſe, with the deviations of modern times, and the hiſtorical account of each order, will, I flatter myſelf, render the acquiring a knowledge of the ſubject both eaſy and entertaining; yet ſufficiently accurate to enable a gentleman to ſketch any drawing of Architecture, fancy or neceſſity may prompt him to have executed, without erring much from the general rules of deſign, and from which a workman will readily reduce the ſmaller parts to the exactneſs requiſite to be worked from.

THE frontiſpiece ſhews each order drawn to the ſame height; that their relative proportion and ſtrength may be ſeen at one view.

THAT information might not ſtop at

the beſt and moſt complete ſpecimens. The effect of awe and reverence this kind of building always produces in the mind, is one of the ſtrongeſt proofs which can be given of its propriety and fitneſs, for large ſacred buildings. Theſe I have avoided, confining myſelf to the Greek and Roman ſtyles, which may truly be called claſſical, and which are in moſt general requeſt and uſe.

Upon the whole, my endeavour is intended more for the gentleman than the artiſt.—How far I have ſucceeded in the ſeveral particulars, I leave to others to determine, aſſuring them I have ſpared no pains to be both accurate and uſeful.

The portrait in the title page, is of the celebrated James Stuart, Eſq. generally

this will, I hope, aſſiſt, as well travellers, as thoſe who read the accounts of profeſſional men; it will facilitate underſtanding their labours, and, of courſe, render them more pleaſant.

I HOPE, in its general acceptance, the title of *Ancient Architecture* will be allowed to the following ſheets, though noticing only the Greek and Roman ſtyles; omitting to mention thoſe very ancient efforts in the ſcience, traces of which remain in Upper Egypt, and in many parts of India, the æra of whoſe foundation is ſo remote, that no certainty can be formed of their age; they evince much labour and much magnificence. Alſo Gothic Architecture I have avoided mentioning, not becauſe I think ſlight of, or diſapprove that light though firm, and grave though pleaſant, kind of Architecture, of which this country boaſts the

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# RUDIMENTS

OF

# ANCIENT ARCHITECTURE.

## PART THE FIRST.

THE ſtudy of Architecture has, in every enlightened age, and by every civilized nation, been held in very honourable eſteem; as a neceſſary and pleaſing ſcience, and of evident utility.

WHEN we conſider it as improved by the Greeks about the time of PERICLES, its perfection and beauty, how conſpicuouſly it exhibited the liberality, ſplendour, and magnificence of thoſe concerned in erecting ſtructures, the remains of which aſtoniſh us; and how highly flattering it was to the mind of man in an age of ſplendour, to raiſe edifices which

generally known by the appellation of *Athenian Stuart:* this is copied from an impreſſion of a plate intended for his promiſed volume. From a perſonal knowledge of Mr. STUART, I can ſay, this is an extraordinary good likeneſs, which from my reſpect to the man, as well as to a great artiſt, I beg leave to multiply.

1789.

enabled them to publiſh their labours, which now furniſh ſtudents at home, with moſt advantages acquirable from viſits to Rome, Athens, &c.

THE important uſe of this ſcience, and the elegant accompliſhment connected with its ſtudy, have almoſt rendered a knowledge of it requiſite to the education of men of faſhion and taſte; and from perſons of high rank and large fortune only, can Architecture hope to receive its proper encouragement, either for elegance or extent. My intention is not to enter into a detail of encomiums on the art; but merely to remark its great utility, and by what high characters its ſtudy has been, and is honoured.

I PROCEED, therefore, to my more immediate deſign, which is, to give a ſhort hiſtorical account of the five orders of Architecture of the ancients; which muſt be conſidered as the baſis of true proportion.

THE great antiquity of building is ſelf-evident: "When men firſt felt the inclemencies of the ſeaſons, it had its beginning, and has ſpread wherever the ſeverities of climate demand ſhelter or ſhade: it is to be traced in the Indian's hut, and the Greenlander's cave; and ſhews in thoſe barbarous parts of the globe,

ſhould ſtrike beholders with admiration; it excites little ſurpriſe that every attention ſhould have been given to the ſtudy of Architecture, and that its profeſſors ſhould have received the moſt liberal encouragement from men of taſte, anxious for renown.

PERSONS of the moſt exalted ſtations have honoured it as ſtudents, and thought it not beneath them to attend to its rules.

IN preſent times, among ourſelves, we have inſtances of dignified perſons ſtudying the rules of Architecture, which, united to true taſte, have produced deſigns that would do honour to the genius of the higheſt profeſſors.

ANIMATED by ſuch examples, it is not ſurpriſing the ſcience ſhould now be regarded with conſiderable attention: the frequent tours to Italy, and other parts celebrated for elegant edifices, though now in ruins, have with the love of, ſpread a vaſt knowledge and juſtneſs of taſte among our nobility and gentry, whoſe leiſure has afforded opportunity for exploring thoſe remains of ancient grandeur; add to this, the great induſtry and attention of ſome of our moſt celebrated architects in examining and delineating thoſe ſtandards of art. The liberal encouragement theſe have experienced, has enabled

heſitated long in their choice. Thus from the nature of things aroſe the idea of what we now call columns, which have from time to time undergone many changes, and at laſt have produced thoſe elegant pillars which we term the orders of Architecture.

FROM the earlieſt antiquity the Egyptians have been conſidered as the inventors of arts; and in the time of their proſperity all nations ſought and ſtudied their philoſophy and their ſciences; ſo that being learned in the arts of the Egyptians became proverbial. Among other arts derived from them, antiquity will juſtify me in numbering Architecture; and here I beg to be underſtood as meaning only that ſpecies of original Architecture, where the ſtrength of the fabric was more regarded than its elegance or ſymmetry; of this kind are the Pyramids: alſo the ruins of a magnificent Temple at Luxor, (the ancient Thebes): of which there remains more than one hundred and thirty columns, all of conſiderable magnitude, and ſome very large (ten feet diameter), with neat, not to ſay elegant ſculpture: and ſeveral other remains in the ſame neighbourhood. Alſo at Komonbu, and other parts of Egypt, as ſhewn by Norden. Fom theſe

from what mean original it roſe to its preſent glory." And perhaps the neighbourly aſſiſtance required in erecting the meaneſt fence againſt the inclemency of the weather, was the firſt introduction of civil ſociety: thus a number of habitations were formed together, and men, in conſequence, had mutual converſation and intimacy. It is eaſy to conceive, that, in this early ſtate of ſociety, genius had expanded but little; the firſt efforts were ſmall, and the ſtructure ſimple; perhaps no more than a number of trees leaning together at the top (in the form of a cone), interwoven with twigs, and plaſtered with mud, to exclude air, and complete the work. In this early period, we may ſuppoſe each deſirous to render his own habitation more convenient than his neighbour's, by improving on what had been already done: thus in time, obſervation, aſſiſting that natural ſagacity inherent even in uncultivated minds, led them to conſider the inconveniences of the round ſort of habitation, and ſeek others more ſpacious and convenient of the ſquare form.

THIS improvement introduced the neceſſity of ſupports for the croſs beams, which were to ſuſtain the roof: the trunks of trees were ſo ready an application, we cannot ſuppoſe they heſitated

fine eye, ſkilful hand, and ſublime genius of that nation is Architecture indebted for its rules of decorum, elegance of deſign, and taſte of ornament, which began to arrive at perfection under the foſtering care of Pericles; which period, including the reign of Alexander the Great, muſt be conſidered as its climax of grace, elegance and beauty in Greece.

IT is a maxim, that the mind of man is influenced by modes of government; and certain it is, the Greeks with their independency, loſt alſo their ſuperior vigour of genius; and what remained was, with the ſpoils of their cities, carried to Rome: wherefore from this period, the Romans muſt be conſidered as the encouragers and patroniſers of Architecture. From this period alſo, its progreſs was great and rapid, though little was done of new invention; but the rules of the Greeks were applied to ſtructures ſo numerous, and of ſuch wonderful extent, that we doubt which moſt to admire, the original inventors of theſe ſublime rules, or thoſe who applied them to ſuch ſtupendous buildings.

THERE are ſome authors well read in ancient hiſtory who wiſh to prove that from the Etruſcans, and not from the Egyptians, the Greeks

wonders which ſtill remain, it can only be conjectured what have been deſtroyed.

I CONSIDER it as not to my purpoſe, to enter into a long detail of the riſe and progreſs of Architecture, but think it fair to conclude from the above, that from Egypt, where all cotemporary nations ſought the arts and ſtudied the ſciences, the Greeks derived their firſt ideas of building, but which were ſo changed and improved by tranſplanting, that ſcarcely can it be known from what ſtock they had their origin. The ſublime and penetrating genius of the Greeks, anxious to add elegance to convenience, diſregarded the maſſive and ponderous Architecture of the Egyptians; whoſe ignorance of the arch made it abſolutely neceſſary for them to have ſmall ſpaces between the columns, with large and ſtrong architraves.

THIS therefore may be conſidered as the track by which Architecture roſe to elegance; for certainly the ſtructures of Egypt are much more ancient than thoſe of Greece; and as it may be conſidered the beſt character of buildings that they provide for the comforts and conveniences of man, ſo it muſt be allowed that the Greeks firſt rendered them productive of grace, regularity and beauty: for to the fine

expoſed from the conſtant moiſture of the earth; it alſo ſerved as a more firm and ſolid footing to the column.

THERE are inſtances of ſeveral buildings of conſiderable elegance and extent which have no plinth to the columns. Such as the Temple of Erictheus at Athens. The Temple of Veſta, at Tivoli, and ſome others. And in all the old Doric Temples.

THE *Torus*, or ſwell above the plinth, may have originated from the root or lower part of the tree being thicker than the part above, which alſo fixed it more firmly on the plinth; or, as by ſome it is conjectured to have been only a rope or bandage round the trunk, to prevent its ſplitting. Or according to Vitruvius it repreſents the ſhoe.

THE *Shaft* of the column has been already noticed.

THE idea of the *Capital*, I think, may have originally been ſuggeſted by ſome tree, whoſe arms ſpreading juſt above where it was neceſſary the upper parts ſhould be cut off (to be of a proper length), the ſwell of the arms very likely gave the firſt idea of the ſwell of the capital, which was alſo attended with this advantage, by being broader on the top, it was better

imbibed their firſt ideas of Architecture. The Etruſcans (or Tuſcans) certainly were well ſkilled in building, and from theſe the Romans in their early ſtate ſought help in all their large works: the remains of the Temple of Jupiter Capitolinus, the Cloaca Maxima, &c. the work of Tuſcan artiſts, ſhew them to have well underſtood the ſcience and the practice of uſeful and elegant Architecture. Neither when we inſpect the antique vaſes, of undoubted Etruſcan workmanſhip, can we deny them to have poſſeſſed taſte and elegance. I ſhall leave theſe arguments to be more fully diſcuſſed by others; as it ſuffices me to have ſhewn, that the Greeks completed the ſcience of Architecture by uniting the uſeful and the agreeable.

To attempt producing an authority or origin for every ſpecies of ornament attending the orders, would be wandering in a maze of uncertainty, attended with much labour, and little recompenſe: the general parts may, with more certainty, have their origin pointed out.

The *Plinth*, it is very reaſonable to imagine, was, at firſt, ſimply a ſquare tile or ſtone, placed under the trunk of the tree or primitive column, to prevent rotting, to which it was expoſed

*Ionic*, the *Corinthian*, and the *Compoſite*; which are diſtinguiſhed from each other by the column with its baſe and capital, and by the entablature.

THE *Tuſcan* order is characterized by its plain and robuſt appearance, and is therefore uſed only in works, where ſtrength and plainneſs are wanted; it has been uſed with great effect and elegance in that durable monument of ancient grandeur, the Trajan column at Rome; indeed, general conſent has eſtabliſhed its proportions for ſuch purpoſes, beyond all others.

THE *Doric* poſſeſſes nearly the ſame character for ſtrength as the Tuſcan, but is enlivened by its peculiar ornaments; the triglyph, mutule, and guttæ or drops, under the triglyph: theſe decorations characterize the Doric order, and in part are inſeparable from it. Its proportions recommend it where united ſtrength and grandeur are wanted.

THE *Ionic* partakes of more delicacy than either of the former, and therefore, as well as on account of its origin, is called Feminine, and not improperly compared to a matronic appearance; it is a medium between the maſculine Tuſcan and Doric, and the virginal ſlender-

better formed for receiving the works above. It would be aukward reaſoning to continue the compariſon of a column to the human figure, and ſo compare the capital to the head of a man.

THE *Abacus* was certainly no more than a tile or ſtone, placed with intent to throw off the water, and prevent its ſinking into the column, which would have endangered the duration of the building.

THE *Aſtragals* and *Fillets* were bandages to bind the column.

THE *Architrave* we may conceive to be the beams or ties neceſſary to hold or unite the columns together.

THE *Frize* was a neceſſary addition when height within was wanted.

THE *Cornice*, and its ornaments, were the ends or outer edge of the timbers, rafters, &c. neceſſary to ſupport the roof.

THE Denteles, Triglyphs, Modillions, &c. from the above ſource alſo, were accidental hints improved, when to uſefulneſs was wiſhed to be added ornament; and which became permanent, when ſtructures of wood gave place to more elegant and durable ones of ſtone.

THE orders as now executed, are five, and range as follow: the *Tuſcan*, the *Doric*, the *Ionic*,

tecture. To the examples ſhewn in the plates, the meaſurements are figured to each particular member; thus, by comparing them, the variations of the moderns from the ancients may be eaſily known.

THE meaſurements are in minutes, that is, one-half of the lower diameter divided into thirty parts or minutes, which method, having fewer calculations than any other, is preferable: the projections are meaſured from the perpendicular of the ſuperior and inferior parts of the column.

ſlenderneſs of the Corinthian:—the boldneſs of the capital, with the beauty of the ſhaft, makes it eligible for porticos, frontiſpieces, entrances to houſes, &c. Denteles were firſt added to the cornice of this order.

THE *Corinthian* poſſeſſes more delicacy and ornament than any other order; the beauty and richneſs of the capital, with the delicacy of the pillar, render it very properly adapted, when magnificent elegance is required: it is frequently uſed for internal decoration to large or ſtate rooms; the appearance is of virginal delicacy, and gay attire.

THE *Compoſite* order is the ſame as the Corinthian in its proportions, and nearly alike in its effects: the addition of the modern Ionic volute to the capital, gives a bolder projection. It is applicable in the ſame manner as the Corinthian.

THE examples choſen to exhibit the effects, and give a general idea of the proportions of the ſeveral parts at one view, are ſelected from antiques; theſe compoſitions having ſtood the teſt of ages, for their ſymmetry and effect: the modern proportions in the deſcriptive account, I have taken from Sir WILLIAM CHAMBERS' uſeful Treatiſe on Civil architecture.

tainly might have been loſt to the moderns. The plainneſs of its appearance, no doubt, cauſed it to be neglected at Rome; but in no other place has been diſcovered any truly ancient example.

Of the Doric we have many remains of very ancient date, which leads me to think the Tuſcan is no other than the Doric more ſimplified, or deprived of its ornaments to ſuit certain purpoſes, where ſtrength and cheapneſs were wanted; nevertheleſs it is applied with propriety and effect, to the entrance of cities, large gateways, and in military architecture, where a maſſive ſtrength only is required.

I have ſelected the profile given by Palladio, he having ſeen ſome remains in Italy, which might lead him to more juſt ideas of what the ancients practiſed in this order. It certainly derived its name from the people of Tuſcany, in Italy, they having firſt uſed it.

Sir William Chambers gives it the following proportions:

"The height of the column is fourteen modules, or ſeven diameters; that of the whole entablature three modules and a half, which being divided into ten equal parts, three are for the height of the architrave; three for the frize;

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# FIVE ORDERS.

OF the TUSCAN order little hiſtoric can be ſaid; its plainneſs of ornament gives it the firſt place in moſt treatiſes: there is no regular example of this among the remnants of antiquity. Piraniſi has given a drawing of a Tuſcan baſe found at Rome, but of what date is uncertain. Vitruvius, in an indiſtinct manner, has mentioned the general proportions, but through his whole book does not refer to one ſtructure of this order. The Trajan and Antonine columns at Rome are reckoned of the Tuſcan order, though they have eight diameters for their height; the torus and capitals are certainly more ornamented than is conſiſtent with Tuſcan plainneſs. The fluting to the necks alſo are after the moſt ancient Doric examples. It is ſomewhat ſingular there ſhould be no remains of this order; and were it not for what little Vitruvius has written of it, it certainly

Indeed the various examples of the Doric order of theſe uncouth and inelegant proportions, nearly prove this to be the order of columns firſt uſed.

THOUGH the Tuſcan pillar is more plain in the ornaments, and, as now practiſed, of fewer diameters; yet, as we have neither example, nor authority, on which to ſuppoſe it ever much varied from the rules at preſent acknowledged, I think we may conclude it is no other than the Doric order, by being executed plainer (as before obſerved), adapted to more menial ſervices by the inhabitants of Tuſcany.

THE Doric order, (which is no ſmall mark of its antiquity), has experienced many great changes in its proportions and parts, originally very low, as before remarked; afterwards it was allowed ſix diameters, and in ſucceeding times eight.

INDEED the hiſtory of the Doric order may be divided into three epocha. Firſt when the columns did not exceed four diameters in height, as to the Temple called Thoricion, ten leagues from Athens; here the columns have four diameters, and are not fluted, except four and a half inches under the capital, with regular Doric fluting; the reſt is ſmooth.

frize; and the remaining four for the cornice: the capital is in height one module: the baſe, including the lower cincture (which is peculiar to the meaſurement of this order) of the ſhaft, is alſo one module; and the ſhaft, with its upper cincture and aſtragal, is twelve modules: in interior decorations, the height of the column may be fourteen modules and a half, or even fifteen modules; which increaſe may be in the column only." It is cuſtomary in executing this order to diminiſh it one quarter; I think without ſufficient reaſon; as its character of extraordinary ſtrength would be better preſerved, by the uſual diminution of one eighth, or one ſixth.

Of the Doric order there are many examples ſtill remaining; ſome of very high antiquity, and of proportions ſo diſſimilar to the practice of later times, that one cannot help concluding, they were produced before experience had matured the rules of art. In ſeveral buildings exhibited in the ruins of *Pæſtum*, *Ionia*, and *Athens*, the height of the columns does not exceed four diameters, or at moſt four and a half: the low appearance of theſe in large buildings, muſt ſurely convince us uſefulneſs was regarded more than elegance of deſign. Indeed

where the columns have eight and three quarters diameters, and are on baſes.

VITRUVIUS allows this to be the moſt ancient order, and gives the following account of its origin: "Dorus, the ſon of Helenis, and the nymph Optyce, built a Temple in the ancient city of Argos, to the goddeſs Juno, which happened to be of this order, but which then had no regular proportions; it derived its name from the patron of the building. This example, or order, was followed by all the cities of Achaia."

"ION, the ſon of Xuthus, afterwards built a Temple in Aſia, to Apollo Panionius, of this order; and, to render it more agreeable to the eye, he gave ſix diameters to the column, being guided therein by the example of nature, which has given to the height of man ſix times the length of his foot."

MODERN practice allows eight diameters, and a baſe, which was never given to the Doric order by the ancients: this is another mark of its antiquity; for certainly the baſe is no leſs proper than elegant.

CONCERNING the flutings, whether they were at firſt practiſed or not, is impoſſible to determine: the remains of this order of the

Alſo to a Temple at Corinth, where the columns are only three and a half diameters, and are fluted. To theſe may be added, thoſe remaining at *Pæſtum*, in Italy; where to one Temple the columns are four diameters high, to another about one third leſs, and to the other about one third more.

THE ſecond æra may be preſumed, when the columns had not ſix diameters in height; as to the Propylea, or grand entrance into the city of Athens; to the Temples of Minerva and Theſeus, at the ſame place, which were built in the flouriſhing time of Pericles, whoſe columns are only five and a quarter diameters high. Alſo the more ancient Temple of Apollo, at Delos, where the columns have five diameters, and are ſmooth or plain; having twenty channels or flutings three inches long in the neck, or top of the column, and as many at the foot, two inches long.

THE third point of time is when ſix or more diameters were allowed, as to the Temple of Auguſtus at Athens, or as Stuart, on good evidence, calls it, the Entrance to a Market, where ſix diameters are uſed. Theſe are all without baſes: in this diviſion muſt be included the Temple of Hercules, at Cora, where

what we at preſent ſee them; the places aſſigned them alſo corroborate this idea.

" VITRUVIUS ſays, that in building, they laid the joiſts from the interior wall to the exterior parts, and as much of the joiſt as appeared unhandſome was ſawed off, which, not having a pleaſing effect, they made tablets like the triglyphs now in uſe, fixed them againſt the ſawed ends, and painted them in wax, &c. Thus the triglyphs, interjoiſts, and metope, in Doric work, had their origin from the diſpoſition of the timbers in the roof; afterwards in other works, ſome made the rafters that were perpendicularly over the triglyphs, to project outward, and carved their projecture; hence, as the triglyphs aroſe from the diſpoſitions of the joiſts, ſo the mutules under the corona were derived from the projecture of the rafters, wherefore, in ſtone or marble ſtructures, the mutules were repreſented declining, in imitation of the rafters; and alſo on account of the droppings from the eaves, it is proper they ſhould have ſuch declination."

THIS alſo explains the ornament and ſituation of the guttæ, or drops.

THE ornaments on the metope, or the ſpace between the triglyphs, may have been origi-

oldeſt date have flutings. I am inclined to think, when any thing like ornament was wiſhed to be added, the fluting of columns early preſented itſelf. The original columns having been trees, it was the natural effect of a hot climate on their bark to make it crack or divide, which I think would readily give the hint of flutings. There are examples among the antiques of the column being ſquared off, or wrought with pans, as they are called, inſtead of hollows. Of this kind is the Temple of Minerva at Syracuſe, of very ancient Doric: the pillars are cut in pans or angles, and are without baſes. The Temple of Diana at the ſame place is alſo in the ſame ſtyle of Doric.

To the Temple of Hercules at Cora the columns have the lower third part with pans and, the upper part of the ſhaft with the regular Doric fluting, which is a ſingular inſtance of mixture of ſtyle in antique columns. Theſe columns have eight and three quarters diameters for their height, and ſtand upon baſes of a very ungraceful form.

THE triglyph, a characteriſtic mark of this order, has more the appearance of art; the ends of projecting rafters will produce this effect, or near enough, to be improved into what

ner of a Doric fluted column, which differs from every other, being very ſhallow, and without any ſpace or fillet between the flutings, which are generally twenty, ſometimes twenty-four.

THE modern proportions from the before-cited author, are as follow:

" THE height of the column, including its capital and baſe, is ſixteen modules: the height of the entablature, four modules; which being divided into eight parts, two are for the architrave, three for the frize, and three for the cornice: the baſe is one module in height; the capital thirty-two minutes or a little more."

THE IONIC order has the following account of its origin by VITRUVIUS.

" ION (the ſame as before mentioned) building a temple to Diana, and ſeeking ſome new manner, to render it more elegant, had recourſe, as before in the Doric order, to the human figure; and gave to this new order a feminine delicacy: thus he was the firſt who gave eight diameters to a column, that the aſpect might be more pleaſing; and that its appearance might be more lofty, he added a baſe, in imitation of a ſhoe: the volutes, like locks or plaits of hair, hanging on each ſide,

nally trophies of the Deity, or implements of ſacrifice placed there: the bull's ſkull is peculiar to the Doric order.

M. WINKELMAN has taken ſome pains to prove from a paſſage in EURIPIDES, that the metopes or ſpaces between the triglyphs were open in the moſt ancient Temples. How this may have been, cannot now be determined: thoſe ſtructures which remain, have the ſpace filled with maſonry.

THE profile here given is from the theatre of Marcellus, which has ever been conſidered as a juſt proportion for this maſculine order: the meaſurements are according to M. DESGODETZ. The denteles in the cornice belong not ſo properly to this order as to the Ionic: I have taken the liberty to alter the ſlope of the corona, which in the original is declining, and is thought in modern times to have a heavy effect: it was executed there, perhaps on the rules before ſtated; or more probably, for ſome optical reaſon, as it had a conſiderable elevation. The column has eight diameters, which is now the general practice, is without a baſe, but the attic baſe, or its peculiar one may be uſed. This example is not fluted; but the baſe to this order (Plate VII.) ſhews the manner

alſo rendered their aſpect confuſed and embarraſſing; on which account, and the maſſy appearance of the Doric column, it was thought improper for ſacred buildings: of this opinion were Tarchenius and Pytheus, with many ancient Architects; alſo the celebrated Hermogenes, who, when he was building the Temple of Bacchus at Teos, rejected the Doric, though all the marbles were ready cut, and in its ſtead erected a Temple of the Ionic order."

FROM the remains of this very celebrated building, the example of this order here ſhewn is taken: the grandeur of its appearance will, I flatter myſelf, juſtify the choice: it is here given as reſtored in that elegant work the "Ionian Antiquities."

DENTELES properly belong to the Ionic cornice, they repreſent the *aſſers*, or ſmaller rafters, which ſupport the tiles.

THE volute of the capital is now generally executed on an angular plan, the ſame as in the Compoſite order; ſo that, viewed every way, it has the ſame appearance: this differs from the general mode of the Antiques, which was to have the volutes parallel. And to Michael Angelo this was attributed as a new invention;

he gave to the capital, ornamented with fruits, or flowers in feſtoons, and furrows, or flutings down the column were wrought, reſembling the folds or plaits of a matron's garment." —" Thus he invented two kinds of columns, in the Doric imitating a manly robuſt appearance, without ornament; in the Ionic, regarding a female delicacy, accompanied with ornaments pleaſing and elegant."—" Succeeding architects much approving the taſte and ingenuity of this deſign, allowed eight diameters and a half to this order."

THIS account of VITRUVIUS points out in what manner another column or order of Architecture was introduced, an invention which has juſtly been celebrated and followed, on account of the beauty and elegance of its parts. Many Temples, and other ſtructures, have been built of this order in various parts of Greece and Italy.

VITRUVIUS records an anecdote much in praiſe of the Ionic order, in the following words: " The difficulty attending the proper adjuſtment of the mutules, metopes, and triglyphs in Doric ſtructures, was ſuch, as frequently to be a cauſe of much inconvenience and trouble to architects in large buildings, and

alſo

than one third of the breadth of the fluting, nor narrower than one quarter thereof; the ornaments of the capital are to correſpond with the flutings of the ſhaft; and there muſt be an ove above the middle of each fluting. The entablature being divided into ten equal parts, three are for the architrave; three for the frize; and four for the cornice. In interior decorations, where much delicacy is required, the height of the entablature may be reduced to one fifth of the height of the column.

THE CORINTHIAN order, in the opinion of VITRUVIUS, "differs from the Ionic only in its capital; the Ionic capital having no more than one third of the diameter of the column for its height; but the Corinthian capital is allowed one entire diameter, which gives to the column a noble, but delicate grandeur. The other members placed on the Corinthian pillar, are common to the Doric and Ionic orders; for it has no particular ſpecies of ornament peculiar to its cornice: ſometimes it has the Doric mutules and triglyphs in the architrave; ſometimes an Ionic frize, with denteles in the cornice; in a manner, it is no more than a third order, riſen out of the former two,

invention; but examples are found in the capitals of the angle columns, in the Temple of Erictheus at Athens; and in the Temple of Fortuna Virilis at Rome.

PIRANISI has endeavoured to prove the firſt idea of the Ionic volute to have been derived from ſhells; be this as it may, many pleaſing forms of convolution may be obtained from the ſection of ſhells.

THE modern Ionic repreſented on the plate is according to Scamozzi, which is of good ſymmetry and form, erring only in being too much enriched.

THE ſtandard of the modern proportions is as follows:

" THE height of the column is eighteen modules; and that of the entablature four modules and a half, or one quarter the height of the column, as in the other orders, which is a trifle leſs than in the regular antique Ionics: the capital is twenty-one minutes; and the baſe thirty minutes in height: the ſhaft of the column may be plain, or fluted, with twenty, or twenty-four flutings, whoſe plan may be a trifle more than a ſemicircle, becauſe they then appear more diſtinct; and the fillet or interval between them muſt not be broader than

cornice, the modillion is ever an attendant. But exactly according to this deſcription of Vitruvius, is the cornice of the portico at Athens, called *Poikilie*, as repreſented by Stuart.

THE beauty and elegance of this order have rendered it famous, and the many examples exiſting among the fragments of antiquity, ſufficiently evince the great eſteem with which it was regarded.

THE ravages of cruel and deſolating war have not left us one remain of this order, of the many celebrated examples which the city of Corinth poſſeſſed, where arts of every kind, and particularly Architecture, eminently flouriſhed and were carried to perfection. In later times, the conduct of Lucius Mummius, in the deſtruction of that poliſhed people and city, would have juſtly been conſidered as the groſſeſt barbariſm: the Temples, the ſacred buildings were deſtroyed, and levelled with the ground; ſo that at one ſtroke the works of ages were deſolated, the labours and ingenuity of thouſands deſtroyed, and poſterity deprived of every trace of this order, in the place of its nativity and nurture.—Although Rome would not ſuffer Corinth as a rival city, there is no doubt

two, which has nothing peculiar to itſelf, but the capital." The origin of which he thus records:

" A MARRIAGEABLE young lady of Corinth fell ill, and died; after the interment, her nurſe collected together ſundry ornaments with which ſhe uſed to be pleaſed; and putting them into a baſket, placed it near her tomb; and, leſt they ſhould be injured by the weather, ſhe covered the baſket with a tile. It happened the baſket was placed on a root of acanthus, which in ſpring ſhot forth its leaves; theſe running up the ſide of the baſket, naturally formed a kind of volute, in the turn given by the tile to the leaves."—" Happily *Callimachus*, a moſt ingenious ſculptor, paſſing that way, was ſtruck with the beauty, elegance, and novelty of the baſket ſurrounded by the acanthus leaves; and, according to this idea or example, he afterwards made columns for the Corinthians, ordaining the proportions ſuch, as conſtitute the Corinthian order."

VITRUVIUS, in the foregoing account, forgot the peculiarities of the Corinthian cornice, or, the entablature to that order was not then practiſed in the manner we find remaining among ancient buildings; for to this

cornice,

thus is ſeldom employed but in the Compoſite order: the entablature to this order may be reduced to two ninths, or one fifth of the height of the column; in which caſe it is beſt to uſe the Ionic entablature, or reduce the denteles of the cornice,"

THE COMPOSITE or *Roman* order certainly owes its origin to that conſtant ſolicitude after novelty, which ever renders the mind of man reſtleſs in enlightened and highly cultivated ages. The deſire of variety and novelty, either of new invention, or combination, certainly engaged the Roman architects to unite with the proportions and enrichments of the Corinthian order, the angular volute of the Ionic, and by this union to compoſe a new order. This order has been handled very ſeverely by ſome critics, whoſe palates are pleaſed with nothing which does not reliſh ſtrongly of the ruſt of high antiquity: theſe have endeavoured to draw on it a ſtigma and diſcredit, it by no means deſerves.

THE introduction of the angular Ionic volute, and the omiſſion of the upper row of leaves in the capital, certainly give it a more bold and noble aſpect, than that of the Corinthian capital, yet different from any of the other

doubt ſhe deigned to follow the rules and laws of art eſtabliſhed by her vanquiſhed enemy, eſpecially in Architecture. The elegance and purity of ſtyle in many of her buildings clearly evince Grecian ingenuity and art.

THE profile here given, is according to PALLADIO's meaſurements of the Corinthian pillars to the portico of the Rotunda at Rome: the univerſal celebrity of this ſtructure, pointed it out as a proper example.

THE moderns have adapted the following proportions: "The column is twenty modules in height; the entablature five modules; the baſe one module, and may be either Attic or Corinthian: the capital has ſeventy minutes in height; the proportion of the members of the entablature, is the ſame as in the Tuſcan and Ionic orders. If the entablature is enriched, the ſhaft of the column may be fluted, and the flutings may be filled to one third part of their height with cabling, which will ſtrengthen the lower part of the column, and make it leſs liable to injury. In very rich interior decorations, the cabling may be compoſed of reeds, ribbands, huſks, flowers, &c. The capital is enriched with olive leaves, as almoſt all the antiques at Rome of this order are; the acanthus

portions as the two former orders, *viz.* being divided into ten equal parts, three are for the height of the architrave, three for the frize, and four for the cornice."

I SHALL add here, more to complete the hiſtory than to recommend their uſe, that there are ancient examples of oval columns; where the circle of the column is elongated by a broad plain ſpace on the two oppoſite ſides of the ſhaft. Of this kind were ſome fragments found in the Iſland of Delos, by M. Le Roy. There are two others at la *Trinite du Mont*, at Rome. Alſo in the tomb near Mylaſſa in Greece, according to M. De Choiſeul; this elegant ſtructure is very perfect; is of a ſquare form, on a baſement; the pillars are inſulated, and ſupport a vaulted cieling highly enriched; each front has two oval fluted columns with the narrow face outwards; at the angles are pillaſters having the ſame enrichments as the columns; the capitals are compoſite, and the volutes are omitted. This elegant little morceaux is of white marble, and about nineteen feet ſquare.

HAVING thus given the particulars relative to each order, I ſhall conclude this part with ſome general obſervations, neceſſary to be

other orders, poſſeſſing an elegance and projection very pleaſing, and may be uſed with very agreeable and happy effects.—There are many examples remaining at Rome, which ſhew the general eſtimation of this order there, in the height of its ſplendour and proſperity. In their triumphal arches, it was uſed with good effect, where it produced an agreeable boldneſs, uniting elegance and ornament.

THE example here given is, that executed in the triumphal arch, erected to the honour of Veſpaſian and Titus at Rome; the juſtneſs of the proportions, with the elegance of the ornaments, mark it as a proper ſtandard for the Compoſite order.

THE proportions of the moderns are as follow: "The height of the column is twenty modules; and that of the entablature five modules; the capital has ſeventy minutes in height; the baſe meaſures the ſame as in the Doric and Ionic orders; and as the module is leſs, all its parts will of courſe be more delicate: the ſhaft may be enriched with flutings, to the number of twenty or twenty-four, as in the Ionic order; there is no reaſon why they ſhould be augmented. The principal members of the entablature may have the ſame proportions

mouldings, is termed a profile; on the choice, diſpoſition, and proportion of theſe, depends the beauty or deformity of the profile. The moſt perfect are, ſuch as are compoſed of few mouldings, varied both in form and ſize, fitly applied with regard to their uſes, and ſo diſpoſed, that the ſtraight and curved ones ſucceed each other alternately. In every profile there ſhould be a predominant member, to which all the others ought to be ſubſervient, and ſeem made either to ſupport, to fortify, or to ſhelter it from the injury of the weather, as in a cornice where the corona is principal, the cyma or cavetto cover it, and the modillions, denteles, ovolo, and talon ſupport it."

"WHEN ornaments are employed to adorn the mouldings, ſome of them ſhould be left plain, in order to form a proper repoſe; for, when all are enriched, the figure of the profile is loſt. In a cornice the corona ſhould not be ornamented, nor the modillion band; neither ſhould the different facias of architraves, the plinths of columns, fillets, nor ſcarce any ſquare member, be carved; for they are, generally ſpeaking, either principal in the compoſition, or uſed as boundaries to other parts; in either of which caſes, their figures ſhould

known and obſerved, in delineating or making deſigns in Architecture; theſe I have extracted from the work before quoted, and have given them in the author's own words, as alteration is needleſs, and liable to miſlead.

An order may be divided into two parts, the column, including the plinth of its baſe, with the abacus of the capital; and the entablature, which includes all above the capital, and may be divided in the large, into the architrave, the frize, and the cornice.

"By examining the antiques, it will be found, that, in all their profiles, the cyma and the cavetto are conſtantly uſed as finiſhings, and never applied where ſtrength is required; that the ovolo and talon are always employed as ſupporters to the eſſential members of the compoſition, ſuch as the modillions, denteles, and corona; that the chief uſe of the torus and aſtragal, is to fortify the tops and bottoms of columns, and ſometimes pedeſtals, where they are frequently cut in the form of ropes; and that the ſcotia is employed only to ſeparate the members of baſes, for which purpoſe the fillet is alſo uſed, not only in baſes, but in all kinds of profiles."

"An aſſemblage of eſſential parts and mouldings,

by the modillions or mutules; and theſe are to be dependent upon the intervals of the columns, and ſo diſpoſed, that one of them may correſpond with the axis of each column. It is farther to be obſerved, that the ornaments muſt partake of the character of the order which they enrich; and thoſe uſed in the Doric and Ionic orders muſt be of a ſimpler kind, and groſſer make, than thoſe employed in the Compoſite and Corinthian."

"IN the exteriour, whatever does not contribute to the general effect of the whole building, is in a great meaſure uſeleſs, and an expence that might more judiciouſly be employed in places where it could be more attended to. —The parts that are in themſelves large, and ſo formed and diſpoſed as to receive broad maſſes and ſtrong impreſſions of light and ſhade, will of courſe excite great ideas; but if they are broken into a number of ſmall diviſions, and their ſurface ſo varied as to catch a thouſand impreſſions of light, demi-tint, and darkneſs, the whole will be confuſed, trifling, and incapable of cauſing any great emotions."

THUS far Sir W. CHAMBERS. An obſervation or two more, and I finiſh the ſubject.

FIRST, The appearance of columns is often

be diſtinct and unembarraſſed. The dentele band ſhould remain uncut, where the ovolo and talon immediately above and below it are enriched; for, when the denteles are marked, particularly if they be ſmall, the three members are confounded together, and, being covered with ornament, are much too rich for the reſt of the compoſition; a fault carefully to be avoided, as the juſt and equal diſtribution of enrichments is on all occaſions to be attended to.—For, in effect, the ornaments of ſculpture in Architecture, are like diamonds in a lady's dreſs, with which it would be abſurd to cover her face, and other parts that are in themſelves beautiful.

" WHEN mouldings of the ſame form and ſize are employed in one profile, they ſhould be enriched with the ſame kind of ornaments. —It muſt be obſerved, that all the ornaments of mouldings are to be regularly diſpoſed, and anſwering perpendicularly above each other; the middles of the modillions, denteles, oves, and other ornaments, all in a line; for nothing is more confuſed and unſeemly, than to diſtribute them without any kind of order. The larger parts are to regulate the ſmaller; all the ornaments in the entablature are to be governed by

nution ſhould be ſeldom leſs than one eighth part of the lower diameter of the ſhaft, nor more than one ſixth: this latter is the more graceful: ſome, by way of giving a better contour or appearance, allow a ſmall ſwell, or bellying, in the lower part of the middle diviſion of the pillar.

It may not be altogether uſeleſs to give the general rules to be obſerved in *pedeſtals*, where it is neceſſary to introduce them. A determinate rule cannot be given, as they muſt vary in height according to the circumſtances which render them uſeful: they have ever been conſidered as mere auxiliaries, to give height, and elevate the column above ſurrounding objects which impede its view. When they are uſed by choice, it is common to give them one third, or one quarter part of the height of the column and entablature, which is thus divided: of nine equal parts, two are for the baſe, one for the cornice, the remaining ſix for the die of the pedeſtal, which is equal in ſize to the plinth of the column: the enrichments ſhould be regulated by thoſe of the entablature, &c. When columns are in couples, if pedeſtals are uſed, they ſhould have but one; alſo in a colonade or periſtyle there ſhould be but one pedeſtal

ten varied by adding ruſticated cinctures at equal (or other) diſtances to a column: this is a modern invention, gives a very unnatural appearance, and diſguiſes the noble figure of the column. Ruſtic work is with greater propriety, and better effect, introduced into large entrances, parks and gardens; alſo into grottos, baths, or fountains, where an irregular and rough appearance better ſuits the place and purpoſe. *Le Clere* obſerves theſe kind of ruſtic ornaments are never to be imitated, excepting in the gates of citadels or priſons, in order to render theſe entrances more frightful and diſagreeable.

THE flutings of columns are ſometimes wrought round, or ſpirally on the column; there is an ancient example of this, in a ſmall temple below *Trevi* in Italy, the plan and elevation of which are given us by Palladio, where of four columns in front, two have the flutings ſpirally, and the two center ones are wrought with leaves on the ſhaft.

THE rule for the diminution of columns has ever varied: the ancients frequently diminiſhed the column from the very foot, or from one quarter or one third of its height: the latter method is now generally practiſed: the diminution

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# RUDIMENTS

OF

# ANCIENT ARCHITECTURE.

## PART THE SECOND.

### OF THE TEMPLES OR SACRED BUILDINGS OF THE ANCIENTS.

I HOPE to be pardoned in requeſting the reader's attention to an obſervation or two, before we enter on the rules of VITRUVIUS concerning ſacred buildings.

OF all the buildings of the ancients, thoſe ſacred to their Deities remain moſt perfect, and in the greateſt number. Indeed, conſidering the polytheiſm of their religion, (the Greeks are reported to have had thirty thouſand Gods; nor were the Roman Deities leſs numerous) and how much men and nations vied

continued, having breaks or projections in the cornice, &c. ſo that each column may ſeem to have its particular pedeſtal.

EACH column has its particular *baſe*. The Tuſcan baſe is the moſt ſimple, having only a torus and plinth. The Doric baſe has an aſtragal more than the Tuſcan. To the Ionic baſe the torus is larger on a double ſcotia, with two aſtragals between. The Corinthian baſe has two toruſes, two ſcotias, and two aſtragals. The Compoſite baſe has one aſtragal leſs than the Corinthian. The Attic baſe conſiſts of two toruſes and a ſcotia, and is applicable to every order except the Tuſcan, which has its particular baſe. Plate 7.

on, and reverence of a Deity, whoſe purity of nature requires diſtinct places for religious ſervices, attended by every mark of awe and reſpect, beſt ſuited to expreſs their ideas of reverence and ſubmiſſion to Omnipotent Power.

MANKIND in the rudeſt ſtate ever acknowledged Powers Divine. The earlieſt writers, ſacred and profane, deſcribe them performing their religious ſervices on the top of mountains, or elevated places; thereby, making the neareſt poſſible approach to heaven, and believing their prayers would be more readily heard. In the ſacred writings, there are various inſtances of elevated ſituations being preferred; and the ſame appears evidently to have prevailed among the heathens; for at Rome, Athens, &c. the moſt ſacred temples are on the moſt elevated ſituations.

IN Homer, among other inſtances, the piety of Hector is commended by Jupiter, for the many ſacrifices made by him, on the top of Mount Ida. In the fable of Mount Parnaſſus, with others, the eminence is conſidered as the hallowed reſidence of the poetic Genii, or Gods. At what period, or by what nation of the heathens, temples were firſt erected, does not appear. The Perſians did not judge the Gods

vied in endeavouring to ſhew the greateſt liberality in erecting buildings to the honour of their tutelar deities, or when they had vowed worſhip and homage to any particular one; I ſay, when we conſider what variety of opportunities offered to ſhew honour, to exhibit ſplendour, and to diſplay liberality, we need not wonder at the great number of ſacred edifices ſtill remaining: indeed they are ſo many, and of ſuch magnificence, as chiefly to abſorb the traveller's attention, the remains of other public ſtructures being but few. I have therefore given no more on public edifices, than what VITRUVIUS has written of ſacred ones, and the rules given by him for the diſpoſition of columns.

## OF TEMPLES.

THE following account of their origin and progreſs will, I think, be conſidered as rational; for doubtleſs they had their ſtates of progreſſion, as well as every other human invention.

NATURE has implanted in the mind of man ſo ſtrong an idea of a ſuperiour power, that every nation has ſome worſhip or ceremonies, by which they ſhew their dependance on,

early ſtate of arts, to produce a building merely ſuited to the neceſſary purpoſes. But when ſociety was more enlarged and refined, and the profits of commerce and dominion accumulated to wealth, then the mind of man, which naturally runs toward excellence, was not content with the plain and ſimple ſtructures already built. A modern writer has well obſerved, that, " Thoſe who have already all they can enjoy, muſt enlarge their deſires. He that has built for uſe, till uſe is ſupplied, muſt begin to build for vanity, and extend his plan to the utmoſt power of human performance; that he may not ſoon be reduced to form another wiſh:" and, it is likely no ſmall ſpur was alſo uſed by the influence of thoſe concerned in the worſhip and ſacrifices of the times; for additional wealth naturally excited an increaſe of ſplendour and more coſtly ceremonies: theſe required more room, and a correſponding increaſe of ſtate and magnificence, that the ſeveral rites, &c. might be ſuitably performed: thus, an edifice of more elegance, a building of greater extent and richer embelliſhments was required, which would ſhew ſuperiour honour and reſpect to the Deity worſhiped.

THUS, from the ſimpleſt ſtructure, roſe the

Gods to be of human ſhape, (as did the Greeks), therefore had no temples, thinking it abſurd to confine the Gods within walls, whoſe houſe and temple the whole world was.

MOUNT Ida was remarkable for the quantity and largeneſs of its timber, and I believe it is univerſally felt and allowed that the places beſt calculated to inſpire religious ideas are groves, or thick woody places, where gloomy dulneſs and ſhade naturally impreſs the mind with awe, and lead it to contemplation. This is farther confirmed by the ſacred groves, which were always adjoining the oldeſt and moſt eminent temples. Pliny alſo aſſures us, that trees in old times ſerved for the temples of the Gods. Tacitus reports the ſame to have been the cuſtom of the old Germans. Q. Curtius ſays the ſame of the Indians. The Druids, who has not heard of their ſacred oaks and conſecrated groves. The Romans too, practiſed the ſame mode of worſhip, and had *Luci*, or groves, dedicated to ſome particular Deity in moſt parts of the city of Rome.

SUCH, we may therefore ſuppoſe, were the places firſt ſet apart for religious worſhip; but when the weather, or inclination, rendered an encloſed place deſirable, they laboured, in this early

is hypæthral, to which Vitruvius gives ten columns in front. This is a variation recorded by himſelf, and without any particular notice of the violation of the rule; from which it ſhould appear as not conſidered of much conſequence.

THIS difference alſo is to be obſerved between the temples built by the Greeks, and thoſe by the Romans. The rule of the former, was to give to the flanks one column more than double the number of thoſe in front, thus an octaſtyle would have ſeventeen columns in the flanks, as to the temple of Minerva at Athens. The Romans, on the contrary, gave only double the number of intercolumniations; thus to an hexaſtyle, they would make only eleven columns in the flanks, that is, ten intercolumniations, making two columns leſs in the flanks, than the Greek made; as is to the temple of Fortuna Virilis at Rome, and to the temple at Niſmes in France.

THE walls of the cell were always placed oppoſite the columns of the pronaos, and poſticum, according to the rule; at leaſt I recollect but one example to the contrary, which is in the temple of Theſeus at Athens.—I thought it neceſſary to notice theſe inſtances

of

the Antis, Proſtyle, &c. till invention and ingenuity, aided by unbounded liberality, crowned the whole with the hypæthral edifice. Excited by ambition, and enabled by vaſt riches, whoſe ſources were far-extended territory and numerous fertile provinces, Emperors, and even private perſons, were enabled to erect the moſt coſtly temples, the extent and magnificence of which are truly aſtoniſhing.

It is a remark worthy notice, that the ancient architects did not follow in a ſervile manner the rules delivered by Vitruvius: yet certainly what he wrote, were the rules by which they planned their great outline, or deſign; however they might vary the ſmaller or inferior parts of an edifice. To enumerate a few inſtances of variation:

The temple of Minerva at Athens has eight columns in front; and Vitruvius allows but ſix to a peripteral, of which order this building is.

The temple of Minerva Pollias has ſix columns in front, yet is proſtyle; although Vitruvius allows but four to this order.

The temple of Jupiter Olympus at Athens has no more than eight columns in front, yet

is

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# VITRUVIUS

ON

## SACRED BUILDINGS.

"SACRED Buildings, or Temples, differ in their various figures and aſpects. Of the firſt order is the *Antis*; 2*dly*, The *Proſtyle*; 3*dly*, The *Amphiproſtyle*; 4*thly*, The *Peripteral*; 5*thly*, The *Pſeudodipteral*; 6*thly*, The *Dipteral*; 7*thly*, The *Hypæthral*; which are diſtinguiſhed in this manner:

THE edifice or temple is called *Antiæ*, when it has in the front antæ, or pilaſters, at the corners of the wall which forms the cell; and between the pilaſters, in the middle two columns, which ſupport the pediment or porch; of which examples are at the three Temples of Fortune, the one neareſt the Colline Gate.

2*dly*, THE *Proſtyle* is the ſame as the Antis, only columns are added oppoſite the pilaſters or

of the variation of the ancient architects, that the researches and genius of modern times might not be led into error, or fettered by observing as law, that which was not adhered to by those we wish to imitate.

VITRUVIUS

intercolumniations, and the thickneſs of one column between the walls and the outer columns. Of this order Rome affords no example; but at Magneſia, the Temple of Diana, by Hermogines Alabandin; and that of Apollo, built by Amneſta, are examples.

*6thly*, THE *Dipteral* is octoſtyle or eight-columned, both before and behind; but it has a double row of columns round the cell, as in the Temple of Jupiter Quirinus of the Doric order, and the Ionic Temple of Diana at Epheſus, built by Cteſiphon.

*7thly*, THE *Hypæthral* is decaſtyle or ten-columned, both before and behind: the other parts are the ſame as the Dipteral, but within it has a double row of columns, one above the other all round, reſembling a porch, which is called a Periſtyle: the middle has no roof; it has folding-doors both before and behind. We have no example of this at Rome; but Athens has one, the Temple of Jupiter Olympus, which is octoſtyle or eight-columned.

THERE are alſo round temples, of which ſome are *Monopteral*, without cells, and built on columns: the other is called *Peripteral*. Thoſe without cells have a tribunal or throne, and are aſcended by ſteps of one third of the

antæ of each corner, which ſupport a chapiter or architrave, the ſame as in the Antis: an example of this manner is the Temples of Jupiter and Faunus, in the Iſle of Tyber.

3*dly*, THE *Amphiproſtyle* is the ſame as the preceding, only a poſtern or back front *(Poſticum)* is added, with columns and pediment, the ſame as to the Proſtyle.

4*thly*, THE *Peripteral* has in the front and hinder porch *(Poſticum)* ſix columns, and eleven, counting the corner ones, on each ſide. And theſe columns are ſo placed, that the ſpace of an intercolumination ſhall be left between the wall and the outer range of columns, leaving an ambulatory round the cell of the edifice: as in the Gate of Metellus, the Temple of Jupiter Stator deſigned by Hermodius; and that founded by Mariana to Honour and Virtue, built by Mutius, and wants the hinder porch.

5*thly*, To the *Pſeudodipteral*, the columns are ſo placed, that in the front and behind there are eight columns, and on each ſide, counting the corner ones, fifteen; and the walls of the cell muſt correſpond, or run parallel with the four centre columns, both before and behind: there muſt be the ſpace of two inter-

ſitions of their parts; as the Temple of Caſtor in the Circus of Flaminius: and the Temple of Vejovius between the two groves; alſo the Temple of Diana of the Groves; where the columns are added on both ſides the walls of the porch. This kind of building, as in the Temple of Caſtor in the Circus, was firſt uſed in the Temple of Minerva within the Citadel at Athens, and in the Temple of Pallas at Sunium in Attica. They have the ſame proportions as the others; for the cell is in length double its breadth; and the ſame rule is followed for the ſides as for the fronts.

SOME there are who uſe the Tuſcan diſpoſition of the columns, although they are of the Corinthian or Ionic orders.

To Temples, whoſe walls with the antæ project to form a porch, two columns are placed oppoſite the walls which form the cell; thus blending the Tuſcan and Greek manners.

AGAIN, others by removing the walls of the cell, and placing them between the intercolumination, leave a very large ſpace within the cell; the other parts preſerve the ſame proportion and ſymmetry. Thus has ariſen a new order, which is called *Pſeudodipteral;* and this kind is particularly uſeful for ſacri-

diameter of the temple: the columns, placed on pedeſtals, are as high as the diameter of the Temple, taken at the outer ſide of the pedeſtals; their thickneſs is one tenth part of the height of the ſhaft and capital: the height of the architrave is half the diameter of the column: the frize, and other ornaments above, may be according to the general rule.

THE *Peripteral* is built with an aſcent of two ſteps, on which the pedeſtals of the columns are placed: the wall of the cell is diſtant one fifth part of the diameter of the Temple from the pedeſtals of the columns: in the middle is left a ſpace for folding doors: the diameter of the inner part of the cell muſt be equal to the height of a column without the pedeſtal; the columns round the cell are placed with ſuitable proportion and ſymmetry. The encloſure in the middle is thus proportioned: one diameter of the whole building for its height; half is for the cupola, excluſive of a flower on the top of the pyramid: the ſize of the flower ſhall be the ſame as a capital of the columns; the other parts may be according to the proportions already written.

BY the ſame general proportions other kind of Temples are built, but have different diſpoſitions

column; as in the Temple of the divine Julius; the temple of Venus in Cæſar's Forum; and many others after the ſame manner.

THE *Syſtyle* has two diameters of the column between the intercolumination, and the plinths of the baſe are equal to the ſpace which is between two plinths; as in the Temple of Fortuna Equeſtris, near the Stone Theatre, and others made after the ſame proportions. Both theſe ſorts are inconvenient; for the ladies, when entering the Temple to worſhip, cannot paſs the colums arm in arm unleſs they go ſideways: alſo, by the frequency of the columns, the view of the door, and the ſigns or trophies of the Deity, are hid, and the narrowneſs of the porch is inconvenient for walking.

THE *Diaſtyle* has this diſtribution, viz. three diameters of the columns between the intercolumination, as in the Temple of Apollo and Diana. This has its inconveniencies; becauſe the architrave, on account of the diſtance between the columns, is liable to break.

IN the *Araeoſtyle* they uſe neither ſtone nor marble, but make the beams of durable timber. This kind of building is ſtraggling and heavy, low and broad. The pinacles are generally ornamented with fictile or earthen ware, or

fices. The ſame kind of Temple cannot be made to every God, becauſe of the diverſity of the ceremonies to be performed.

THUS I have explained, as far as I was able, every kind of ſacred building—their order—the ſymmetry of their parts—the difference of their figure; and what variety is to be obſerved in them, I have been careful in writing."

THE elegance and magnificence of a ſtructure depending very much on the proper placing of the columns; and as it appears connected with the ſubject here treated of, I add the rules laid down by VITRUVIUS, obſerved by the ancients, and allowed by the moderns, in the diſpoſition of columns, called by that writer,

### THE FIVE SPECIES OF BUILDING,

" OF buildings there are five ſorts or ſpecies; which are called, 1ſt, The *Pycnoſtyle*, that is, thick of columns. 2d, The *Syſtyle*, that are a little wider. 3d, The *Diaſtyle*, ſtill wider. 4th, The *Araeoſtyle*, more diſtant than is proper. 5th, The *Euſtyle*, which is the proper diſtance.

To the *Pycnoſtyle*, the diſtance of the intercolumination is one diameter and a half of the column;

middle one ſhall have three modules both before and behind: the height of the columns ſhall be eight modules and a half: by this diviſion of the intercolumniation, the columns have a juſt proportion. Rome affords no example of this kind; but at Teos in Aſia is one, the temple of Bacchus, which is octaſtyle.

HERMOGENES was the firſt inventor of theſe proportions; he alſo firſt uſed the octaſtyle pſeudodipteral: he firſt contrived to take away, without injuring the beauty, the interior range of columns in the dipteral (which are thirty four), thereby very much decreaſing both the labour and expence: this alſo gave a very large ambulatory round the cell, and, without miſſing the ſuperfluity, preſerved the majeſty of the whole; for the walls and the columns were firſt thus diſpoſed, that the view, on account of the aſperity *(aſperitas)* of the intercolumniation, ſhould have more majeſty: beſides, it has this convenience, of ſheltering a great many perſons from rain, as well round as within the cell, which includes a great ſpace. This diſpoſition of pſeudodipteral buildings was firſt diſcovered by the labour of the great and diſcerning ſpirit of Hermogenes;

braſs gilt after the Tuſcan manner, as is to be ſeen in the Circus Maximus at the Temple of Ceres, and in Pompey's Temple of Hercules, and alſo in the Capitol.

THE *Euſtyle* manner is now to be treated of; which, with great juſtice, for its uſefulneſs, beauty, and durability, merits every commendation. It is formed by allowing to the diſtance of the intercolumniations two diameters and a quarter, and to the middle intercolumniation only, both before and behind, three diameters. Thus the figure has a beautiful aſpect, is acceſſible without impediment; and round the cell is a ſtately ambulatory.

THE rule is this:

THE front of the building of it is *Tetraſtyle* (four columns), is divided into eleven parts and a half, without reckoning the projection of the baſe of the column. If it is *Hexaſtyle*, (ſix columns), it is divided into eighteen parts. If it is *Octaſtyle* (eight columns), it is divided into twenty-four parts and a half. Of theſe parts, one, whether the building be tetraſtyle, hexaſtyle, or octaſtyle, ſhall be a module, which is to be the thickneſs of a column. Each intercolumniation, except the middle one, muſt be two modules and a quarter; the middle

and ungraceful appearance, on account of the frequency of the columns, and the narrowneſs of the intervals: for this reaſon, the ſymmetry and proportion of each order ſhould be attended to. Alſo the thickneſs of the corner columns muſt be increaſed one fiftieth part; for, by the great ſurrounding ſpace, they will appear ſmaller to the view, and it is neceſſary art ſhould rectify this defect of viſion.

For the diminution of the ſhaft of a column, the following rule may be obſerved: if the ſhaft of a column is fifteen feet high, the diameter of the lower part is divided into ſix parts; five of which are for the top diameter. If columns are from fifteen to twenty feet high, the lower diameter is divided into ſix parts and a half; five and a half of which are for the top diameter. If columns are from twenty to thirty feet high, the lower diameter is divided into ſeven parts; ſix of which are for the top diameter. If columns are from thirty to forty feet high, the lower diameter is divided into ſeven parts and a half; ſix and a half of which are for the top diameter. If columns are from forty to fifty feet high, the lower diameter is divided into eight parts; ſeven of which are for the top diameter. If any are higher than

mogenes; which, like a fountain, will ſerve poſterity from whence to draw rules for the Science of Architecture.

THE columns to the *Araeoſtyle* ſhould have for their thickneſs one eighth part of their height. For the *Diaſtyle*, the height of the column is to be divided into eight parts and a half; one part for the thickneſs of the column. For the *Syſtyle*, the height ſhall be divided into nine parts and a half; one part for the thickneſs of the column. Alſo for the *Pycnoſtyle*, the height ſhall be divided into ten parts; one part for the thickneſs of the column. The *Euſtyle* alſo is divided into eight parts and a half, the ſame as the Diaſtyle: one part is given for the thickneſs of the column; and for the ſolidity of its parts it ſhall have its proper intercolumniation. As the ſpace between the columns increaſes, ſo ought alſo the thickneſs of the columns. If it is araeoſtyle, and they ſhould have only a ninth or tenth part for their thickneſs, they will then appear tall and ſlender, on account of the length of the intervals; for the air will in appearance diminiſh the thickneſs of the columns. On the contrary, if it is pycnoſtyle, and the columns have an eighth part for their thickneſs, they have a clumſy

and

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## *Of the* HOUSES *of the* ANCIENTS;

### *Their* SITUATION *and* DISTRIBUTION.

THIS article was intended for its proper place in the dictionary, but in making it at all ſatisfactory, it has ſo much increaſed, I think it more adviſeable to make a ſeparate article of it.

Reſpecting the dwellings of the ancients, we can only conjecture the ſituation of their various apartments, from combining the deſcriptions of ſeveral claſſic authors; little of ſuch buildings remaining to guide our reſearches. Thoſe of which traces are found, ſuch as the baths of Titus, Caracalla, Dioclesian, the Villas of Adrian, Mecænas, &c. are of little uſe to this enquiry, their extent and magnificence exceeding that of common ſtructures.

To ſpeculate on the accounts left by Pliny, and others, may not be unentertaining; perhaps not without its uſes: for, from the numerous, ſtudied, and multiplied conveniences of

thoſe mentioned, they ſhall have the ſame proportions for their diminution.—An additional thickneſs is properly given, on account of the increaſed height; for, as the eye is attracted by beauty, it is neceſſary it ſhould be flattered by the pleaſure it receives from proportionate and juſt diſtribution of parts, as it is when deceived by judicious additions; elſe the whole will have a bulky and inelegant effect."

## OF THE DISPOSITION OF THE HOUSES OF THE GREEKS.

WE ſhall here follow the account given by Vitruvius.—"The Greeks uſe no atrium, but from the gate of entrance they make a paſſage of no great breadth; on one ſide of which, is the ſtable, on the other, the porters' rooms, and theſe are directly terminated by the inner gate: paſſing on, is the periſtylium, having porticos on three ſides; on the ſouth ſide, are two antæ, which ſupport and form a paſſage, within which, (*i. e.* to the right and left) are the great œci, in which the miſtreſs of the family, and the workwomen reſide. To the right and left, are cubiculi, or chambers, of which one is called *Thalamus*, the other, *Amphithalamus*; and under the porticos of the periſtyle are the common dining rooms, chambers, and family rooms. This part of the edifice is called *Gynæconitis*.

THROUGH the paſſage with the antæ, is a larger houſe, having a more ſpacious periſtyle, in which are four porticos of equal height, or ſometimes the one which looks

of their Villas, ſome new ideas of plan and diſtribution may ariſe; the comforts and conveniencies of life are ſo valuable, that they ſhould be ſought from every ſource.

THE Greeks and Romans were particularly ſolicitous to keep the body in health, by conſtant and ſtrong exerciſe; to this purpoſe, it was neceſſary they ſhould have ſpacious covered places, that in bad weather they might not be obſtructed in their diverſions, or games; which tended as well to the health and ſtrength of the body, as to that of the mind. Under this impreſſion, it is not to be wondered, their gardens, or pleaſure grounds, were extenſive, and poſſeſſed all thoſe conveniencies which conduced ſo much to health and delight, as freely enjoying the freſh air in the Geſtatio, or the Xyſtus.

To avoid anticipating conjecture, I ſhall proceed to the ſubject in queſtion, beginning with a deſcription of the houſes of the Greeks, next thoſe of the Romans, and finiſhing with their Villas.

opulent, they prepared triclinia, cubicula, and proviſions for ſtrangers; the firſt day inviting them to dinner, afterwards, ſending them poultry, eggs, herbs, fruits, and other productions of the country. Maſters of families, therefore, when they abode in the hoſpitium, ſeemed not to be from home, enjoying the full liberty of retirement, in theſe apartments.

Vitruv. Lib. 6. cap. 10.

## OF THE CITY HOUSES OF THE ROMANS.

RESPECTING the houſes of the Romans, I know of no better guide than Vitruvius, who, after deſcribing ſuch as are proper for merchants, bankers, &c. obſerves, "Thoſe of the nobles, who bear the honours of magiſtracy and decide the affairs of the citizens, ſhould have a princely veſtibule, lofty atrium, (hall), and ample periſtylium, with groves and extenſive ambulatories, erected in a majeſtic ſtyle; beſides libraries, pinacothecas, (picture rooms), and baſilicas, decorated in a manner ſimilar to the magnificence of public buildings; for in theſe places, both public affairs and private cauſes are oftentimes determined."

looks towards the ſouth, has higher columns; and this periſtyle, which has one portico higher than the reſt, is called *Rhodian*. In theſe houſes they have elegant veſtibules, magnificent gates, and the porticos of the periſtyle are ornamented with ſtucco, plaſter, and lacunariæ, (compartments.)

In the portico which looks to the north, is the cyzican triclinium and the pinacœtheca; to the eaſt, are the libraries; to the weſt, the exhedræ; and in thoſe looking to the ſouth, are the ſquare œci, ſo large, that they may eaſily contain four ſets of dining couches, with the attendants, and a ſpacious place for the uſe of the games; in theſe halls, the men hold their convivial entertainments, for it is not cuſtomary in Greece for the mothers of families to lie down to dine. This periſtylium and part of the houſe, is called *Andronitides*, becauſe here the men only are invited, without being accompanied by the women.

On the right and left, alſo, ſmall houſes are erected, having proper gates, dining rooms, and convenient chambers, that when ſtrangers arrive, they may not enter the periſtylium, but be received in this hoſpitalium; for when the Greeks were more refined, and opulent,

THE Corinthian œci have columns placed either on the podium (dado), or on the floor; and above have an architrave and cornice. The Egyptian had the columns detached from the wall, in the manner of a periſtyle; the ſpace between the columns and the wall, was covered with a pavement, and formed a walk round. This range of columns ſupported an entablature, on which was placed another range of columns, one fourth part ſmaller than the former, between which, were the windows. The Greek or Cyzican œci were ſituated towards the north, generally had a view of the garden, with folding doors in the middle; they had alſo folding windows, to the right and left, that the garden might be ſeen.

THE Tetraſtyle œci, from the name, appears to have had only four columns, and conſequently was of the leſs enriched ſort.

## OF THE VILLAS OF THE ROMANS.

THE Roman Villas conſiſted of three parts, one called the *Urbana*, a part where the maſter and his family dwelt, the other the *Ruſtica*,

FROM Vitruvius and other writers, the following may be conſidered as nearly the uſual mode of diſtribution:—The part which firſt preſented itſelf, was the veſtibulum, or what we call the portico; paſſing this, you entered the atrium, or hall, at the extremity of which, was the tablinum, or repoſitory for books, records, &c.; from the ſides of the atrium, you paſſed by alæ, or ailes, to the cavædium, which was an open court, ſurrounded by a portico, or piazza, at the extremity of which was the Baſilica, or place to adminiſter Juſtice, &c.

THE triclinia, or dining rooms, with their procœton, or room for attendants; the cubicula, or chambers, with the baths, were diſpoſed on the ſides of the cavædium; alſo on the ſides of the baſilica were the pinacotheca, or rooms for pictures and library; paſſing all theſe apartments, you entered the periſtylium, which was as ſpacious as poſſible, and ſurrounded with a portico, or piazza; this was always of an oblong form; at the extremity of the periſtylium were œci, or halls, of which Vitruvius mentions the Corinthian, the Tetraſtyle, the Egyptian, and the Greek, or Cyzican.

THE

render thoſe places temperate at the time they are generally uſed. The ſummer triclinium ſhould look to the north, becauſe this aſpect is not like the others, rendered hot at the ſummer ſolſtice; for being turned from the courſe of the ſun, it remains always cool, and when uſed, is ſalubrious and pleaſant. To the ſame aſpect alſo, ſhould be diſpoſed Pinacotheca (picture rooms), as well as embroidering and painting rooms, that the colours uſed in the works, on account of the equality of the light, may remain unchanged.

THE better to convey an adequate idea of the extent, accomodation, and grandeur of the Villas of the Romans. I ſhall add Pliny's, (the conſul) deſcription of his Villa at Laurentinum. It may be proper to obſerve, that this Villa was conſidered as on a ſmall ſcale.

AFTER deſcribing the route, the views on the road, &c. he adds, my Villa is large enough to afford a convenient, tho' not ſumptuous reception for my friends. The part which firſt preſents itſelf is the *atrium*, (court yard) plain, but not mean; then the *portico*, in form of the letter O, which ſurrounds a ſmall, but pleaſant area, this is an excellent retreat in bad weather, being ſheltered by glazed windows,

deſtined for the uſes of huſbandry; and the third the *Fructuaria*, or receptacle for the fruits of the earth.

In the choice of ſituation and aſpect, the Romans were very particular, the latter requiring peculiar attention, as only by the aſpect of the buildings and rooms, could they be rendered conveniently habitable in bad weather; glaſs for windows being then unknown, and its ſubſtitutes coſtly, and not in general uſe.

Vitruvius has given us the following rules: the winter triclinium (dining room) and bath ſhould look to the winter's declining ſun, becauſe the afternoon light is there uſeful; beſides the weſtern ſun ſhining thereon produces heat, and makes that aſpect warm and pleaſant in the evening; bed-chambers, and libraries, ſhould look to the eaſt, for in theſe the morning light is required; it is alſo proper, that the books in libraries may not decay, for in thoſe that look to the ſouth and weſt, they will be damaged by damps and worms, which the humid winds generate and nouriſh. The ſpring and autumn triclinium ſhould look to the eaſt, for the windows being then turned from the ſun, proceeding weſtward, render

angle, is a *cubiculum*, of a curved or round form, the windows of which admit the ſun of conſequence through its whole courſe. In the walls, are inſerted library preſſes, furniſhed with books, more for amuſement than ſtudy; cloſe to this, is the *dormitorium*, (ſleeping room), ſeparated by a ſpace, having a covering of wood work, which collects and diſtributes the vapour to the room, in ſalubrious temperament. The remainder of this wing is allotted to my ſervants and ſlaves; yet, is generally ſufficiently neat for viſitors.

On the right ſide of the *triclinium*, is a moſt elegant *cubiculum*, with another large *cubiculum*, or moderate *cœnatio*, (common eating, or ſupper room), which receives light, both from the ſun and the ſea; after this, is a *cubiculum*, with a *procœton*, (ſervants room), for height, a ſummer, but for ſhelter, a winter apartment; being ſkreened from all winds: a wall only ſeparates another *cubiculum*, with a *procœton*. There you enter the ſpacious and extenſive *cella frigidaria* of the bath; againſt the walls of which, are two projecting *baptiſteria*, ſufficiently large to ſwim in; joining to this, is the *unctuarium*, the *hypocauſtum*, and *propnigeon* of the baths;

but more by the projection of the roof. Beyond the *portico* is a pleaſant *cavædium*, (open court) paſſing which, is a handſome *triclinium*, which advances upon the ſhore, ſo that it is gently waſhed by the waves, when the ſouth-weſt wind blows. On every ſide are folding doors, or windows as large, ſo that from the ſides and the front, you enjoy a proſpect, as it were, of three ſeas, and backwards are ſeen the *cavædium*, the *portico*, and the area; again the *portico*, and *atrium*, terminated by woods and diſtant mountains. On the left of the *triclinium*, but not ſo forward, is a large *cubiculum*, (chamber or apartment) and then a ſmaller one, where one window admits the riſing, and another the ſetting ſun. From hence, you view the ſea rather more diſtant, but more ſecurely. This *cubiculum* and *triclinium*, by their projecture, form an angle, which not only retains, but augments the heat of the ſun's rays.

HERE then is my *hybernaculum* (winter room or apartment) and the *gymnaſium* (place for exerciſe) for my family, which is never incommoded by any winds, but ſuch as bring cloudy weather, and deſtroy the otherwiſe ſerene ſituation of the place. Adjoining to this angle,

circle of the *geſtatio*, is joined, a ſhady row of young vines, with a walk, ſoft and pleaſant, even to the naked feet. The garden abounds with fig and mulberry trees, to which the ſoil is ſuitable, but not to other trees. The proſpect here, not leſs pleaſant than that of the ſea, is enjoyed from a *cœnatio*, rather diſtant from the ſea; on the back it is encompaſſed with two *diætæ*, whoſe windows look to the veſtibule of the Villa, and to a fruitful kitchen garden.

Hence, a *crypto-porticus*, (a long incloſed room, or portico) extends, for ſize, comparable to a public building, with windows on both ſides; thoſe next the ſea, the moſt numerous, on the garden ſide they are ſingle, with fewer in the upper row. Theſe, when the day is ſerene and calm, are all opened, but when the wind is troubleſome, thoſe on the oppoſite ſide are opened without any inconvenience. Before the *crypto-porticus*, is a *xyſtus*, (a ſpacious place for exerciſe, or a terras) fragrant with violets, in which the heat of the ſun is increaſed by the reflection of the *crypto-porticus*, which at the ſame time, keeps off the north-eaſt wind; wherefore it is hot in the front, and cool in the rear;

it

and two other cells, more elegant than ſumptuous. Skillfully contrived, adjoins the *callida piſcina*, (warm bath), where thoſe who ſwim, enjoy a view of the ſea: not far diſtant, is the *ſphæriſterium*, (tennis court, of a circular form), which enjoys the warmeſt rays of the declining ſun.

HERE ariſes a *turris*, (pavillion, or ſummer houſe), under which are, two *diætæ*, (ſuite or ſet of apartments), and two alſo above, beſides a *cænatio*, from which is a beautiful proſpect of the ſea, the diſtant coaſt, and ſeveral pleaſant Villas; there is alſo, another *turris*, containing a *cubiculum*, expoſed to the riſing and the ſetting ſun; behind this, is an *apotheca*, and *horreum*, (cabinets, or ſtore rooms), and underneath a *triclinium*, where the noiſe of the ſea is not heard, but only in ſtorms, and then but faintly. This looks on the *geſtatio*, (a place to exerciſe on horſeback, or in a carriage); and the garden which it ſurrounds.

THE *geſtatio* is encompaſſed with box, or roſemary, where the box is wanting; for box, when well ſheltered, flouriſhes much, but withers, if expoſed to the wind, or weather, or to the ſpray of the ſea. To the inner circle

ſpect of the ſea; from the back, of the neighbouring Villas; and from the head, of the woods: each window giving a particular proſpect, which may be ſeen either together, or ſeparately. Adjoining is a *cubiculum*, for night and ſleep; for here neither the noiſe of ſervants, the murmurs of the ſea, the roaring of tempeſts, the glare of lightning, nor even the light of day is perceived, till the windows are opened; but all is profound ſilence, which is cauſed and preſerved by an *andron*, (an open court, or ſpace), which is between the wall of the *cubiculum*, and that of the garden; ſo that all noiſe is drowned by the void ſpace between.

CLOSE to the *cubiculum*, is a ſmall *hypocauſtum*, (ſtove), the heat from which, by a ſmall window, may be regulated at pleaſure. Thence a *procæton* and *cubiculum* extend into the ſun, where it is enjoyed, though obliquely from its riſe, till after mid-day.

WHEN retired to theſe apartments, I ſeem as abſent from my Villa; I receive great delight here, particularly in the time of the Saturnalia, when the other parts of the Villa, by the accuſtomed freedom allowed at thoſe times, reſound with feſtive clamours; for here, I neither

it alſo ſkreens from the ſouth-weſt, and ſeveral other winds. Theſe are its delights in winter; but much greater does it afford in ſummer; for before mid-day, the *xyſtus*, and after, the *geſtatio* and neighbouring parts of the garden, are made temperate by its ſhadow, which is longer, or ſhorter, as the day proceeds. The building is alſo the cooleſt, when the ſun ſhines moſt intenſely on the roof; by opening the windows, the weſtern breezes are enjoyed, and it is therefore never clouded by thick or ſtagnant air.

At the top of the *xyſtus*, projecting from the *crypto-porticus*, is the *diætæ* of the garden, and theſe are my delight; for here in truth, have I placed my affection. In this is an *heliocaminus*, (an apartment made warm by the ſun) one ſide of which looks to the *xyſtus*, the other to the ſea, and both to the ſun. From the folding doors, is ſeen the *cubiculum*, from the windows, the *crypto-porticus;* on the ſide next the ſea, and oppoſite the wall, a very elegant *zotheca* (a cloſet or ſmall room), recedes, to which a *cubiculum* is either added, or ſeparated, by means of glazed windows and curtains. Here are contained two chairs and a bed, from the foot of which, you have a pro-

ſpect

Como, on the confines of Switzerland), in Epiſt. 7, lib: 9, he mentions having ſeveral Seats; two of which afforded him particular delight; and from their ſolemn and gay ſituations, he called one tragedy; the other he called comedy; from one out of the bed-chamber, almoſt from the bed, you might angle in the lake below.

Of neither of theſe Villas are there any remains. What has been traced of the Tyburtine Villa of Adrian, according to the plans publiſhed by Piraneſi, ſhew it to have been of an amazing extent; here was, each upon a grand ſcale, an *Hippodrome;* a *Naumachia*, a *Theatre*, a *Palæſtra*, a *Nymphæum*, a *Caſtle*, for a guard, with a Temple to Mars; a *Piſcina*, a *Bibliotheca*, a *Stadium*, a *Veſtibulum*, of various apartments, (being the entrance to the baths, Stadium, &c. &c.) *Baths*, a *Pretorium*, a *Pinacotheca*, an *Hoſpitalia*, for viſitors; a *Canopum*, an *Accademia*, an *Odeum*, and *Theatre;* a *Lyceum*, a *Palace*, for the Emperor; with many other buildings; each of which were accommodated with various apartments, fitted up in a ſtyle of elegance and grandeur, ſcarcely credible; this truly princely

Palace

neither obſtruct the diverſions of my ſervants, nor they my ſtudy.

THESE conveniencies, theſe pleaſures, are deficient in falling water, yet near the ſurface are wells, or rather ſprings, &c.

Plinii, Epiſt. lib. 2, Ep. 17.

THIS copious deſcription conveys a pretty accurate idea of the extent of a Roman Villa, their numerous apartments, various and multiplied conveniencies; in the deſcription of Tuſcum, by the ſame Pliny, which merits to be called in modern language, a Manſion, more than a Villa, being ſurrounded by an extenſive Domain, and diſtant from Rome, (one hundred and fifty miles); here apartments more numerous, and of greater elegance, are deſcribed; and the garden, or pleaſure grounds, were more abundantly accommodated with extenſive buildings, and conveniencies; nor were theſe two Villas all which were poſſeſſed by the Conſul, for he writes to a friend, I prefer my Villa of *Tuſcum*, to thoſe of *Tuſculum*, *Tybur*, and *Præneſte*. Theſe three, as well as Laurentinum, were in the vicinity of Rome. On the borders of Lake Larium, (his native place, now called Lake Como,

A

# DICTIONARY OF TERMS

USED IN

# ARCHITECTURE.

Palace occupied a ſpace of ground about twelve hundred yards in length.

THE Villa of Mecænas, in the neighbourhood of Tivoli, was alſo very extenſive, and not leſs elegant.

A DIC-

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# DICTIONARY.



ABACUS, the upper member of a column, which ſerves as a covering to the capital; to the Tuſcan, Doric and Ionic, it is ſquare; to the modern Ionic, Corinthian and Compoſite, each ſide is arched, or cut inwards, and is decorated in the centre with a flower or other ornament. See plates 9, 10.

ACANTHUS, a plant, whoſe leaves form an ornament in the Corinthian and Compoſite capitals, and are ſaid to have originally given riſe to the former order.

ACROTERIA, a kind of baſe, placed on the angles of pediments, uſually for the ſupport of ſtatues, &c.

ALÆ, Ailes, alſo paſſages in theatres, houſes, &c. alſo in rooms, &c. the ſpace between the walls and the columns.

AMPHIPROSTYLE, *i. e.* double proſtyle, or having pillars on both fronts; according to

ſerves to crown or accompany a larger, and to ſeparate the flutings in columns. See plate 8.

ANTEPAGMENTA, the upright jambs of a door caſe.

ANTÆ, a ſpecies of pilaſters on the extremity of a wall, uſually having no diminution, nor do the mouldings of their capitals or baſes always reſemble thoſe of the columns.

ANTÆ or *Antis*, i. e. pilaſteral; according to Vitruvius, the firſt order of temples. See page 49.

APOPHYGE, that part of a column where it begins to riſe upwards out of its baſe.

APOTHECA, a cabinet, or ſtore cloſet.

AQUÆDUCT, an artificial canal, built for the conveyance of water from one place to another, either running under ground, or riſing above it. The Romans built very magnificent aquæducts, ſome of which paſſing through rocks and mountains, and over vallies, brought water to Rome, from the diſtance of ſixty miles; their height in ſome places more than one hundred and nine feet; raiſed on two or three tiers of arches. The water brought to the *Caſtellum*, reſervoirs, in the city, was copiouſly diſtributed to all

Vitruvius, the third order of temples. See page 50.

AMPHITHEATRE, a place for exhibiting ſhows, very ſpacious, of a round or oval figure, with many ſeats riſing on every ſide. The area in the middle was called *Arena*, becauſe it was covered with ſand, or ſaw-duſt, to prevent ſlipping, and to abſorb blood. It was alſo called *Cavea*, becauſe ſurrounded by the caves, or dens, in which the wild beaſts were kept. Twelve or fifteen feet above the Arena, was the *Podium*, which projected and had a canopy. The ſeats were diſtributed, the ſame as in a theatre. The entrance to the ſeats was called *Vomitoria*, the paſſage by which to aſcend to the ſeats *Scalæ*, or *Scalaria*, and the ſeats between two paſſages, from the wedge-like form, was called *Cuneus;* theſe as well as Theatres, were originally, only temporary, and of wood; many were afterwards built of ſtone. Rome had ſeveral; the principal, was that built by Titus, called the *Coliſeum*, which was large enough to contain eighty-ſeven thouſand perſons.

ANDRON, a paſſage, open ſpace, or court.

ANNULET, a ſmall ſquare moulding, which ſerves

railing, and, when continued, form a *baluſtrade*.

BAND, a general term for a low, flat, or ſquare member.

BASE, the lower and projecting part of a column and pedeſtal. See page 40. See plates 7, 10.

BASILICA. See *Forum*.

BATHS, *Thermæ*, Rome was ſupplied with a vaſt number of baths, (more than eight hundred), for public uſe; of theſe, ſome were of extent and magnificence almoſt exceeding belief, did not the remains of thoſe of Titus, Diocleſian, Antoninus, &c. fully anſwer the records of hiſtory; they had principally this diſpoſition—to be turned from, or ſheltered from the north and north-eaſt. Theſe ſtately buildings contained porticos, walks, groves, fiſh-ponds, tennis courts, halls, and an infinite variety of apartments, for undreſſing, ſweating, and other uſes: theſe were adorned with the moſt valuable marbles; Jaſper, Alabaſter, and Porphyry, ornamented with paintings of the moſt coſtly and vivid colours, heightened with gold; the floors were of Moſaic work; the perfumes of

parts by pipes. *Frontinus* has left a treatiſe on the ſubject, wherein are deſcribed nine Aquæducts; others were afterwards added.

ARCH, part of a circle or ellipſis.

ARÆOSTYLE, according to Vitruvius, the fourth method or ſpecies of intercolumniation, to which four diameters are allowed between each column. See page 55.

ARCHITRAVE, the loweſt principal member of an entablature, lying immediately upon the abacus of the capital. See plates 9, 10.

ASTRAGAL, a ſmall round member reſembling a ring, which terminates the extremities of the column; is ſometimes uſed to divide the facia of the architrave; when it is frequently cut into beads, &c. See plate 8.

ATTIC BASE. See *Baſe*. See plate 7.

ATRIUM, a hall of entrance to houſes of the Ancients. In Villas, where ſpace could better be allowed, the *atrium* reſembled moſt a ſpacious fore court.

## B.

BALUSTER, ſmall columns, or pillars of wood, ſtone, &c. uſed on terraces or tops of buildings for ornament, and to ſupport railing,

ſorts are uſed in the buildings of the Greeks; one of which they call *Pentadoron*, the other *Tetradoron;* theſe bricks, therefore, which have on every ſide five palms, are called *Pentadoron;* and thoſe which have four, *Tetradoron;* in public works they uſe the former, and in private the latter: of theſe bricks they make half bricks; and in working, the whole bricks are placed in one courſe, and the half bricks in the other; ſo that when both parts are built to a level, they appear to be laid in the walls with alternate faces outward; the middle of the brick being diſpoſed perpendicularly over the joints, giving ſtrength, and not an unhandſome appearance to both parts. *Vitruvius.* No idea is here given of their thickneſs; they were made very thin, almoſt like our ten-inch tiles; as may be ſeen in that remnant of a Roman building, within the walls of Dover Caſtle, and in many other remains of Roman ſtructures.

BUTMENT, or *Abutment*, ſupporters, or props, on or againſt which the feet of arches reſt.

BUTTRESS, a kind of butment, built ſometimes archwiſe, as to Gothic buildings; a

Arabia abounded; the water conducted through pipes of ſilver, fell into ciſterns of ſilver: and as much time was ſpent by the Romans in bathing, and great numbers of people reſorted to the baths, they became what we call a loungeing place; for here poets ſometimes read their compoſition, and ſtudious men uſed to compoſe, hear, dictate, &c. The baths of Dioclesian are reported to have had accomodations for eighteen hundred bathers The names of the bathing apartments were, *Frigidarium*, the cold bath; *Calidarium*, the hot; and *Tepidarium*, the tepid: the ſtove room, *Hypocauſton;* the ſweating room, *Sudatoria;* the undreſſing room, *Apodyterium;* the perfuming room, *Unctuarium*.

Bossage, a term uſed for any ſtone laid with a projection beyond the upright of a building, to be afterwards cut into mouldings, or other ornaments; it is alſo uſed for ruſtic work, becauſe the ruſtics project over the perpendicular of the building.

Bricks, the Ancients uſed three ſorts, one which the Greeks call *Didoron*, which are ſuch as the Romans uſe; they are a foot long, and half a foot broad; the other two ſorts

CARYATIDES, a kind of order in Architecture, in which a female figure is applied inſtead of a pillar; the origin of which is thus handed down by Vitruvius: the inhabitants of Caria, a city of Peloponneſus, made a league with the Perſians againſt their own nation; but the Perſians being worſted, they were afterwards beſieged by the victorious party, their city taken and reduced to aſhes, the men put to the ſword, and the women carried away captives. To perpetuate the memory of this victory, the conquerors cauſed public edifices to be erected, in which, as a mark of degradation and ſervility, the figures of the captives were uſed inſtead of columns, thus handing down to poſterity their merited ſervility and puniſhment. When figures of the male ſex are uſed, they are called *Perſians* or *Perſes*.

CATADROME, an engine of the ancients, like a crane, uſed to raiſe great weights.

CAVÆDIUM, an open court, or void ſpace within the body of a houſe.

CAVETTO, a concave moulding of one quarter of a circle. See plate 8.

CAULICOLI, the little twiſts or volutes under the flower on the abacus in the Corinthian capital,

maſs of ſtone or brick work, ſerving to prop or ſupport buildings, walls, &c. on the outſide, where their great height or weight require additional ſtrength.

## C.

CALIDUCTS, pipes or canals, diſpoſed in or along the walls of houſes, for conveying hot air to diſtant apartments, from a common or cental furnace, as practiſed by the ancients.—This method has been adopted in modern buildings, with good ſucceſs and œconomy.

CANOPUM, a Temple to the Egyptian God *Canopus*, which from the ſtory related by Suidas, repreſented the element water.

CAPITAL, the uppermoſt member of a column, which is as a crown or head thereto, placed immediately over the *ſhaft*, and under the *architrave;* no column is complete without a capital, which has a diſtinguiſhing character for each order.—Tuſcan and Doric capitals conſiſt of mouldings; Ionic, Corinthian, and Compoſite capitals, of leaves and other ornaments.

CARTOUCHE, an ornament in ſculpture repreſenting a ſcroll of paper, &c.

CARY-

an Obeliſk of Egyptian Granate, one hundred and thirty-two feet high; he alſo enlarged it ſo, that it would accommodate, according to the report of Pliny, two hundred and fifty thouſand perſons. There were other Circi at Rome; particularly thoſe of Flaminius, Nero, Caracalla, Severus, &c.

Cœnatio, a ſupper room; theſe were ſmaller than the *Triclinium*, or *Æcos*, and were perhaps what we call the common ſitting room or parlour.

Collarin, or *Collarino*, the neck or frize of a Tuſcan or Doric capital.

Colonnade, a ſeries or continuation of columns.

Column, a round pillar uſed in Architecture, to adorn or ſupport. Columns are of five kinds; the *Tuſcan*, *Doric*, *Ionic*, *Corinthian*, and *Compoſite*, each of which has its particular proportion. The term includes the baſe and the capital.

Composite *order*, one of the five orders of Architecture.

Congé, a ſmall moulding, which ſerves to ſeparate larger ones, called alſo *Liſt* or *Annulet*.

Console, an ornament cut on the key-ſtone of

capital, repreſent the twiſted tops of the acanthus ſtalks; are called alſo *Helices*.

CELL, in an ancient temple, is the incloſed ſpace within the walls.

CINCTURE, a ring, liſt, or fillet, at the top and bottom of the ſhaft of the column; that at the bottom is called *Apophyge*; the top one is called *Annulet*, or *Aſtragal*.

CIRCUS, the length of the *Circus maximus* was three ſtadia, (or furlongs), and a half; the breadth a little more than one ſtadium; ſo that the extreme circumference was more than one mile. In the middle, for almoſt the whole length was a wall, called *Spina*, twelve feet broad, and four feet high; ornamented with various trophies, ſtatues, &c. This Circus was originally built by Tarquinius Priſcus, and was greatly enlarged and beautified by the Emperors; Julius Cæſar adorned it with a portico, three ſtories high; on the inſide it was encompaſſed with a canal, called *Euripus*, ten feet wide, where uſed to be repreſented ſea fights. The ſeats were in the ſame form as in the Theatres, and were ſufficiently ſpacious to hold one hundred and fifty thouſand perſons. Auguſtus added on the middle of the Spina,

an

work, and, from its ſhape, to prevent the water running down the column; it has always a large projection to anſwer its propoſed uſe. The under, or horizontal part of the corona, is called the *Soffit*, and admits of various degrees of ornament, according to the richneſs of the order.

CORRIDOR, a gallery or paſſage in large buildings, which leads to diſtant apartments.

CRYPTO-PORTICUS, a vaulted, ſubterraneous, or obſcure place; alſo an incloſed or private porticus, in dwelling houſes, for exerciſe, walking, &c. in bad weather.

CUPOLA, a round roof or dome, in the form of an inverted cup.

CUBICULUM, a room, or bed-chamber.

CURIA, the hall or apartment in which the legiſlature, or principal perſons of any diſtrict or pariſh *(curiæ)*, aſſembled, both for religious and civil purpoſes, and in principal cities, was near the forum. The word is uſed now for courts of juſtice, and legiſlature.

CYMA, *Cima*, or *Cymatium*, a ſpecies of moulding, which is generally the upper one to an entablature. There are two ſorts of

of arches, with a projection, capable of ſupporting buſts, vaſes, &c.

CONTOUR, the outline of a figure, or piece of Architecture.

COPING *of a wall*, the top or covering made ſloping to throw off water.

CORBEILLE, carved work, repreſenting a baſket with fruits or flowers, ſerving as a finiſh to ſome other ornament. It ſometimes is applied to the vaſe of the Corinthian capital, the word originally meaning a baſket.

CORINTHIAN *order*, one of the five orders of Architecture.

CORNICE, the upper aſſemblage of members in an entablature, commencing at the frize; each order has its particular cornice, with ſuitable enrichments. To the *Tuſcan* it is quite plain; to the *Doric* are added *guttæ*, or bells in the *ſoffit*: the *Ionic* has plain modillions; the *Corinthian* is much enriched, and has modillions; the *Compoſite* is not quite ſo much enriched as the Corinthian. See plates 9, 10.

CORONA, a large flat and ſtrong member in a cornice, called alſo the *Drip*, or *Larmier*; its uſe is to ſcreen the under parts of the work,

doors opened inwards, unleſs otherwiſe permitted by eſpecial law: as to P. V. Poplicola, and his brother, who had twice conquered the Sabines; but the Greek mode was to open to the ſtreet, and when any one went out, he knocked on the inſide, to give warning to thoſe without, to take care; the doors did not move on hinges, as with us, but on pivots, in the upper and lower parts of the door, which was narrower at top than at bottom: they had doors of two, three, and four leaves or folds.

DRIP. See *Corona*.

DROPS or *Guttæ*, in the Doric entablature, are ſmall pyramids or cones, immediately under the triglyph.

## E.

ECHINUS, is properly the egg and anchor ornament peculiar to the *Ionic* capital; it is ſometimes uſed for the whole member inſtead of *ovolo*.

ENCARPUS, uſed to expreſs feſtoons of fruits or flowers on frizes, &c. literally means fruit only.

ENTABLATURE, an ornament or aſſemblage of parts, ſupported by a column or pilaſter over

of this moulding, the *cyma recta*, and *cyma reverſa*. See plate 8.

## D.

DECASTYLE, in ancient Architecture, a building with ten columns in front.

DENTELE, an ornament reſembling teeth, uſed in Ionic and Corinthian cornices.

DIASTYLE, according to Vitruvius, the third ſpecies of intercolumniation, having three diameters between the columns.

DIÆTA, a ſet or ſuite of apartments; but no determinate number of rooms.

DIE, the ſquare or naked piece in a pedeſtal, that part which is between the baſe and the capital. See plate 10.

DIPTEROS, *i. e.* having a double range of columns; according to the arrangement of Vitruvius, is the ſixth order of temples.

DOME, a ſpherical roof.—See *Cupola*.

DORIC *order*, one of the five orders of Architecture.

DOORS of the ancients were commonly raiſed above the ground; were made of wood, braſs, or iron: and, to temples, of ivory and gold. The jambs were called *Antepagmenta*, (folding doors, were called *valvæ*), the doors

FASTIGIUM, the name uſed by Vitruvius for what we call a *pediment*.

FILLET. See *Annulet*.

FLUTINGS, the hollows or channels, which are cut perpendicularly in columns by way of ornament, and which ſhould always both begin and end in the ſhaft, near the extremity of the apophyges; tho' there are examples to the contrary. When flutings are uſed the capital ſhould be enriched.

FOLIAGE, an aſſemblage of leaves.

FORUM, a market place, where things are ſold: alſo where the courts of juſtice are kept. The Greeks, ſays Vitruvius, made their forums ſquare, with large double porticos, the columns cloſe together, adorned with ſtone or marble cornices, having ambulatories in the upper ſtories: but the Romans follow not the ſame method; for, by ancient cuſtom, the ſhews of gladiators are given in the forum: for this reaſon the intercolumniations around the area are made wider. In the ſurrounding porticos the ſhops of the bankers are diſpoſed; with galleries in the upper floors, properly adapted for the uſe and management of the public revenue: the proportion to be one

over the capital: each order of columns has a peculiar entablature divided into three principal parts; the *architrave*, which is divided into two or more *facia*, and reſts upon the capital. The *frize* is next, and may be plain or ornamented. The *cornice* is the top or crowning part. See plates 9, 10.

EPISTYLE, the ſame as architrave.

EUSTYLE, according to Vitruvius, the fifth and moſt eligible method of intercolumniation, having two diameters and a quarter between the columns.

EXHEDRA, in ancient Architecture, a large receſs, where company uſed to retire for converſation, &c. in extenſive buildings was a diſtinct apartment.

## F.

FAÇADE, the front view or elevation of a building.

FACIA, a flat member in the entablature of an order, repreſenting a band or broad fillet in an architrave; if divided, theſe diviſions are called the firſt facia, the ſecond facia, &c. See plate 9.

FASTI-

If the Engliſh foot be divided in one thouſand three hundred and fifty-one equal parts,

| | | |
|---|---|---|
| The foot, | in France | is 1440 of thoſe parts |
| | at Amſterdam | 1258 |
| | at Bern | 1300 |
| | at Florence | 2441 |
| | in Greece | 1360 |
| | at Rome | 1306 |
| | in Spain | 1240 |
| | at Venice | 1540 |
| | at Vienna | 1401 |

FRIZE, or *Friſe*, the middle member of an entablature, having the architrave below, and the cornice above.

FRONTISPIECE, ſometimes ſignifies the whole face or aſpect of a building, but is more properly applied to the decorated entrance of a houſe.

FUST, the ſhaft of a column, or that part which is between the baſe and the capital.

## G.

GESTATIO, a place in the gardens of the ancient Romans for exerciſe on horſeback, or in a carriage, the form generally circular.

GLYPHS, the perpendicular channels cut in the *triglyphs* of the Doric frize.

" third longer than broad. Adjoining the forum, on the warmeſt ſide, was the *baſilica*; where were large covered halls, with galleries ſupported by elegant columns: in theſe galleries were ſhops, where was ſold the fineſt wares; in the middle was a large place for the convenience of merchants and men of buſineſs; at one end was the *tribune*, where cauſes were heard, and other public buſineſs tranſacted. In parts of this building alſo the lawyers or counſellors had apartments. Theſe ſtructures having frequently been converted into chriſtian churches, they, from them, have obtained the name of *baſilica*.

" FOOT, the ancient Roman foot was eleven inches ſix tenths of our foot, and was divided into ſixteen digits; a *palm* was one quarter of a foot. The ancient Greek foot is rather leſs than a quarter of an inch ſhorter than the Engliſh foot; or, to ſpeak with greater accuracy, is eleven inches $\frac{871}{1000}$ of the Engliſh foot.

IT may not be without its uſe to give the compariſon of the Engliſh foot with that of ſeveral other parts of modern Europe.

IF

feet long, and one hundred and ſixty broad, ſupported with two ranges of pillars, which formed a wing on each ſide. The Greeks and the Romans differed in the diſtributing and ordering their apartments. The Romans had magnificent courts and entries, but the Greeks only a narrow entry through which they paſſed into a periſtyle; this entry or paſſage had on one ſide the porter's lodge, and on the other the ſtables. Among the Greeks, the apartments of the women were ſeparate from thoſe of the men, and the latter dined by themſelves. See the diſtribution of ancient houſes, farther explained in the former part of this book.

HYPÆTHRAL, *i. e.* uncovered, or open to the ſky; according to Vitruvius, the ſeventh order of temples, and without a roof.

HYPOTRACHELION, the neck or frize of a capital.

I.

IMPOST, a facia or ſmall cornice which crowns a pier or pilaſter, and from which an arch ſprings.

INSULATED, ſtanding alone, or detached from any contiguous building, &c.

INTERCOLUMNIATION, the ſpace between

GOLA, or *Gula*, a moulding, more uſually called *cyma reverſa*, or *ogee*.

GORGE, a hollow moulding, a *cavetto*.

GOTHIC, a peculiar ſtyle of Architecture, diſtinct from the Grecian or Roman, derived from the Goths, or rather from the Saracens.

GULA. See *Gola*.

GUTTÆ. See *Drops*.

GYMNASIUM, a place for exerciſe, public or private. See *Palætra*.

## H.

HELIOCAMINUS, a place or room made hot by the heat of the ſun; Nero appointed one to be made on the portico before his houſe.

HELIX, or *Helices*. See Cauliculi.

HEXASTYLE, a temple, &c. having ſix columns in front.

HIPPODROME, a place where the ancients exerciſed their horſes, alſo the courſe for the horſe-race.

HORREUM, a Granary, or Repoſitory.

HOUSE, the houſes of the ancients had great and magnificent veſtibules or entries, which were ſometimes two hundred and twenty feet

MODULE, an *architectonic meaſure*, the lower diameter of a column divided into two parts, one is a *module*, each module is divided into thirty *minutes;* thus either is not a determinate, but a proportionate meaſure.

MONOPTERAL, a round temple without a cell. See page 51.

MOULDINGS, thoſe parts which project beyond the baſe or perpendicular face of a wall, column, &c. intended only for ornament, whether round, flat, or curved: the regular mouldings are, 1ſt, the *liſt*, or *annulet;* 2d, the *aſtragal*, or *bead;* 3d, the *cyma reverſa*, or ogee; 4th, the *cyma recta;* 5th, the *cavetto*, or hollow; 6th, the *ovolo*, or quarter round; 7th, the *ſcotia;* 8th, the *torus*. See plate 8. For general obſervations on mouldings, their diſpoſition, &c. ſee page 34. &c.

MUTULE, an ornament in the Doric cornice, anſwering to a *modillion* in the Ionic and Corinthian entablatures.

## N.

NAUMACHIA, the repreſentation of a ſea fight, which was at firſt made in the *circus maximus*, but afterwards elſewhere. Auguſtus

two columns, for the particulars of which, ſee page 54.

IONIC *order*, one of the five orders of Architecture.

## K.

KEY-STONE, the higheſt ſtone of an arch, to which a projection is uſually given, and which is ſometimes cut in ornaments.

## L.

LACUNARIÆ, pannels or coffers in cielings, or in the ſoffits of cornices, &c.

LARMIER. See *Corona*.

LIST, or *Liſtel*. See *Annulet*.

## M.

METOPE, the interval or ſquare ſpace between the triglyphs in the Doric frize.

MEZZANINE, or *Mezzetti*, ſmall or low ſtories between principal ones, uſed as ſervants' apartments.

MINUTE, an *architectonic meaſure*, the lower diameter of a column divided into ſixty parts, each part is a *minute*. See *module*

MODILLION, an ornament reſembling a bracket, in the Ionic, Corinthian, and Compoſite cornices. See plate 9.

MODULE,

ter of a circle, called alſo a *quarter round*. See plate 8.

## P.

PALM. See *Foot*.

PALÆSTRA or GYMNASIUM, a Grecian ſtructure, in its uſe anſwering nearly to the *baths* of the Romans; it was more extenſive, as being intended principally for bodily exerciſes, and formed a part of the civil eſtabliſhment of the Greeks. The firſt part, as one may ſay, conſiſted of a large *Periſtyle*; under the porticos were ſpacious exhedræ, with ſeats, where the rhetoricians and philoſophers taught and converſed. This periſtyle, whether ſquare or oblong, was always two ſtadiæ, or a quarter of a mile in circumference; the fourth portico on the ſouth ſide was double, to protect from tempeſtuous weather: in the middle of this portico was the *ephebium*, which is a very ſpacious exhedra with ſeats; on each ſide of which were the baths, hot and cold, with their apartments. Beyond was another periſtyle of four ſtadiæ in circumference; under theſe porticos, called by the Greeks *Xyſtos*, the athletæ exerciſed in the winter

guſtus dug a lake for this purpoſe near the Tiber; and Domitian built a Naval Theatre.

NICHE, a cavity or hollow in a wall for ſtatues, &c.

NYMPHÆUM, grottos, or buildings ornamented with ſtatues, fountains, &c. and dedicated to the nymphs. Theſe were perhaps occaſionally the entrance to private or retired baths.

## O.

OCTASTYLE, an edifice having eight columns in front.

ODEUM, a ſtructure built by Pericles, at Athens, for the performance of muſic. Plutarch ſays it had within many rows of ſeats and of pillars. The roof was of a conic figure, after the model of the king of Perſia's pavillion.

ŒCI, halls. See the account of the Roman houſes.

OGEE, a *cyma reverſa*.

ORDER, in Architecture, a column entire, conſiſting of *baſe*, *ſhaft*, and *capital*, with an *entablature*. For a particular account of each *order*, ſee the beginning of this work.

OVA, or *ovum*. See *Echinus*.

OVOLO, a moulding which projects one quarter

around; according to Vitruvius, the fourth order of temples; alſo round temples.

PERISTYLE, a range of columns or colonnade, within a court or building like a cloiſter: the internal colonnade to the *hypæthral* temple is a *periſtyle*.

PIAZZA, a continued arched way or vaulting, under which to walk, &c.

PILASTER, a ſquare pillar or column, uſually placed againſt a wall, projecting not more than one fifth or one ſixth of its bigneſs; has the ſame proportions and ornaments as a column, but no diminution.

PILLAR, this word is generally uſed in Architecture, in common with *column*, though, ſtrictly ſpeaking, they are different; thus the ſupporters in Gothic Architecture are pillars, but can never be properly termed columns, varying in ſhape and every particular from the latter.

PLAT-BAND, any flat ſquare moulding with little projection; the different facias of an architrave are called plat-bands; the ſame is applied to the liſt between flutings, &c.

PLINTH, the lower member of a baſe. See plates 9, 10.

PODIUM, a balcony, or open gallery. In the Amphi-

winter ſeaſon. The area or middle ſpace had groves of trees, called *Xyſtacum Silvis*. At the farther end was the *ſtadium*, made with riſing ſteps, where the numerous ſpectators ſtood to ſee the exerciſes. Several of theſe *gymnaſia* were at Athens, and other places; the moſt remarkable, as well for ſize as elegance, was at Athens, near the river Iliſſus, built by Lycurgus and others, of white marble.

PEDESTAL, a ſquare body on which columns, &c. are placed. See plate 10.

PEDIMENT, a low triangular ornament in the front of buildings, and over doors, windows, &c.

PIER, a kind of pilaſter or buttreſs, to ſupport, ſtrengthen, or ornament; the pier of a bridge, is the foot or ſupport of the arch. The wall between windows or doors. Alſo ſquare pillars of ſtone or brick, to which gates to an entrance are hung.

PENTASTYLE, an edifice having five columns in front.

PERIBOLUS, the circuit incloſing the conſecrated place where a temple ſtands.

PERIDROME, the ſpace in a *peripteral* temple, which is between the column and the cell.

PERIPTERAL, *i. e.* having columns all around;

POSTICUM, the porch in the back front of an ancient temple.

PROCŒTON, an anti-room for attendants, either to wait or to ſleep.

PROFILE, the outline or contour of any building, &c.

PROSTYLE, *i. e.* having pillars in front only; according to Vitruvius, the ſecond order of temples.

PRONAOS, the front porch of an ancient temple.

PSEUDO-DIPTERAL, *i. e.* falſe or imperfect dipteral, the inner range of columns being omitted; according to Vitruvius, the fifth order of temples.

PTEROMA, the Greek word for a wall.

PYCNOSTYLE, according to Vitruvius, the firſt method of intercolumniation, having one diameter and a half between each column.

PYRAMID, a ſtructure, which, from a ſquare, triangular, or other baſe, riſes gradually to a point.

## Q.

QUARTER ROUND, a moulding. See *Ovolo.*

QUOINS, ſtones or other materials put in the angles of buildings to ſtrengthen them.

RELIEVO,

Amphitheatre, the Senate, foreign Ambaſſadors, the Veſtal Virgins, and the Emperor, ſat in the Podium, which projected over the wall of the *arena*, and was raiſed twelve or fifteen feet above it. Alſo in a room, that part which anſwers to a pedeſtal, and is called the dado.

PORCH, an arched way, or covering at the entrance of a great building, particularly to churches.

PORTICO, a continued range of columns covered at top, to ſhelter from the weather; alſo, a common name to buildings which had covered walks ſupported by pillars; having theſe diſtinctions, when the portico was on the outſide of the building it was called *peripterium*; and when on the inſide of a hall, court, &c. *periſtylium*; the place for walking, *porticus*. Among the ancients theſe were highly ornamented, and of great extent. The remains of the portico at Palmyra ſhew it to have been full four thouſand feet long. There was a ſquare portico at Athens, whoſe circumference was fourteen hundred feet, adorned with Corinthian pillars, and a great variety of excellent paintings, and therefore called *poikile*.

POSTI-

in holes, reſembling a natural rough appearance.

## S.

SALOON, a lofty, vaulted, ſpacious hall or apartment.

SCAPUS, the ſhaft of a column.

SCIMA. See *Cyma*.

SCOTIA, a hollow moulding uſed in baſes to capitals. See plate 8.

SECTION of a building, repreſents it as if cut perpendicularly from the roof downwards, and ſerves to ſhew the internal decoration and diſtribution.

SHAFT, the trunk or body of a column between the baſe and the capital.

SOFFIT, the under part or ceiling of a cornice, which is uſually ornamented; the under part of the *corona* is called the *Soffit*; the word is alſo applied to the ceiling of an arch, the under ſide of an architrave, &c.

SPHÆRISTERIUM, a circular court, for playing at ball, or other exerciſes; a tennis court.

STEPS for aſcent. Vitruvius regulates their height to about ten inches; but to the ancient temples they are generally higher; to the

## R.

RELIEVO, ſignifies the projection of any carved ornament.

ROMAN *order*, the ſame as the *Compoſite*.

ROOF, the roofs of the ancients, according to Vitruvius, conſiſted of the following parts: *Trabes*, a beam, or wall-plate; being the timber which is laid upon the walls, columns, &c. to receive and diſtribute the preſſure of the roof. *Culmen*, the top or ridge, of conſequence the ridge piece. *Columens*, from whence columns derive their name. This muſt, therefore, be what we call the king-poſt. *Tranſtræ*, if the ſpan of the roof is great, theſe therefore may be conſidered as large or principal rafters; to theſe are added *capreoli*, ſtruts, or braces; *canterii*, ſmall or common rafters, projecting to the extremities of the eaves; *templa*, croſs, or longitudinal pieces, which ſerve to ſupport or ſtrengthen the *aſſeres*, or laths, which ſupport the tiles or covering.

ROTUNDA, a building which is round both within and without.

RUSTIC, the term is applied to thoſe ſtones in a building which are hatched or picked

in

ſeats (*cunei*) roſe above one another, and were diſtributed to the different orders, in the following manner: The foremoſt rows next the ſtage, called *Orcheſtra*, anſwering to our Pit, were aſſigned to the ſenators, and ambaſſadors of foreign ſtates; Fourteen rows behind them to the *equites* or knights; and the reſt to the people. That part which we call the ſtage, had this diviſion; *Scena*, the ſcenes, which were adorned with columns, ſtatues, pictures, &c. according to the nature of the play exhibited. *Poſtſcenium*, the place behind the ſcene, where the actors dreſſed, &c. *Proſcenium*, the place before the ſcene, called alſo, the *pulpitum*, where the actors played, and the *chorus* came to rehearſe, anſwering to our ſtage. In the Greek theatres, the *orcheſtra*, which included a very large ſpace, made part of the ſcene, and here the actors danced: the proſcunium being very ſhallow or ſmall. But in the Roman theatres, this part was aſſigned to the ſenators, &c. there was a kind of canopy, or covering, ſtretched acroſs, to ſhelter from heat or rain, called *peplus*.

THEATRES were, for a long time, of

the Doric temples at Poeſtum they are ſixteen, and to one twenty inches high.

STRIGÆ, the flutings of a column.

STADIA, the ſame as *hippodrome*.

STOA, a *portico*. In one of theſe at Athens, *Zeno* taught his ſyſtem of philoſophy, and inſtituted the ſect named *Stoics*, from the place of their aſſembling.

STYLOBATUM, the pedeſtal of a column.

SYSTYLE, according to Vitruvius, the ſecond method of intercolumniation, having two diameters between the columns.

## T.

TAILLOIR, the *abacus*.

TALON, a *cyma reverſa*.

TEMPLE, among the ancients, according to Vitruvius, there were ſeven different kinds or orders; ſee page 49. The word is applied to buildings uſed to decorate modern gardens, &c.

TENIA, the upper member of the Doric architrave; a kind of *liſtel*.

TETRASTYLE, a building with four columns in front.

THEATRE. The Theatres of the ancients were of a ſemicircular form, the benches or ſeats

to the top of the cell. They are ſituated inverſely, and on the ſide which is turned toward the ſcene, they are ſupported by wedges, not leſs than half a foot high; alſo oppoſite the cells, in the beds of the lower ſeats, apertures are left, two feet long, and half a foot high. Rome has not any theatre thus conſtructed; but the provinces of Italy, and many cities of Greece, can ſhew them. Lucius Mummius, who deſtroyed the theatre of Corinth, brought to Rome the vaſes of braſs; and which were uſed at the plays acted in his triumph: likewiſe many ingenius architects, who conſtruct theatres in ſmall towns, to ſave expence, make uſe of *earthen veſſels* to help the ſound, which being adjuſted according to rule, anſwer the purpoſe."

TONDINO, an *aſtragal*.

TORUS, or *Tore*, a large ſemicircular moulding, uſed in the baſe of columns. See plate 8.

TRABEATION, the entablature.

TRICLINIUM, a dining room.

TRIGLYPH, an ornament peculiar to the Doric frize. See plate 10.

TROCHILUS, the *ſcotia*.

wood and without ſeats: Pompey firſt erected a theatre of ſtone, which would contain forty thouſand people; and to avoid the animadverſion of the Cenſors, he dedicated it as a temple to Venus: there were afterwards ſeveral others built, one by Balbus; and another dedicated to Marcellus; which was large, and very handſome, as appears by its remains. Adjoining this theatre, behind, and round the ſtage end, was a large double portico, where the ſpectators took ſhelter in very bad weather.

Of the *Vaſes* of the theatre, their theory and conſtruction are to the moderns entirely unknown: but to inveſtigation, their hiſtory is nevertheleſs curious: all we know of them is, what Vitruvius reports, which is as follows: "of the *braſen vaſes*, which are uſed on account of the magnitude of theatres, they are ſo formed, that upon being ſtruck, they ſound in themſelves the notes *diateſſaron*, *diapente*, and ſo in order to *diſdiapaſon;* after which they are diſpoſed according to the laws of muſic, in cells, formed within the ſeats of the theatre in ſuch a manner, as not to touch the wall, and have a vacancy all round them,

to

alſo when a range of columns is erected on one continued high *plinth*, it is called a *Zocle;* it differs from a pedeſtal, being without baſe or cornice.

ZOTHECA, a ſmall room, or alcove, which might be added to or ſeparated from another, by means of curtains and windows. See *Pliny's deſcription of Laurentinum.*

ZOPHORUS, the frize.

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FINIS.

TURRIS, a tower; in civil Architecture a pavillion, or garden temple.

TUSCAN *Order*, one of the five orders of Architecture.

TYMPAN, the flat ſurface or ſpace within a pediment.

## V.

VASE, the body of a Corinthian capital, alſo an ornament uſed in Architecture, &c.

VAULT, an arched roof, the ſtones or materials of which are ſo placed as to ſupport each other.

VESTIBULE, the entrance to large houſes; the part under the portico.

VOLUTE, the ſcroll or ſpiral horn, uſed in Ionic and Compoſite capitals.

## X.

XYST, a large court with a portico on three ſides, planted with rows of trees, where the ancients performed athletic exerciſes—running, wreſtling, &c. See *Palæſtra*.

## Z.

ZOCLE, or *Zoccolo*, a low ſquare member, which ſerves to elevate a ſtatue, vaſe, &c. alſo

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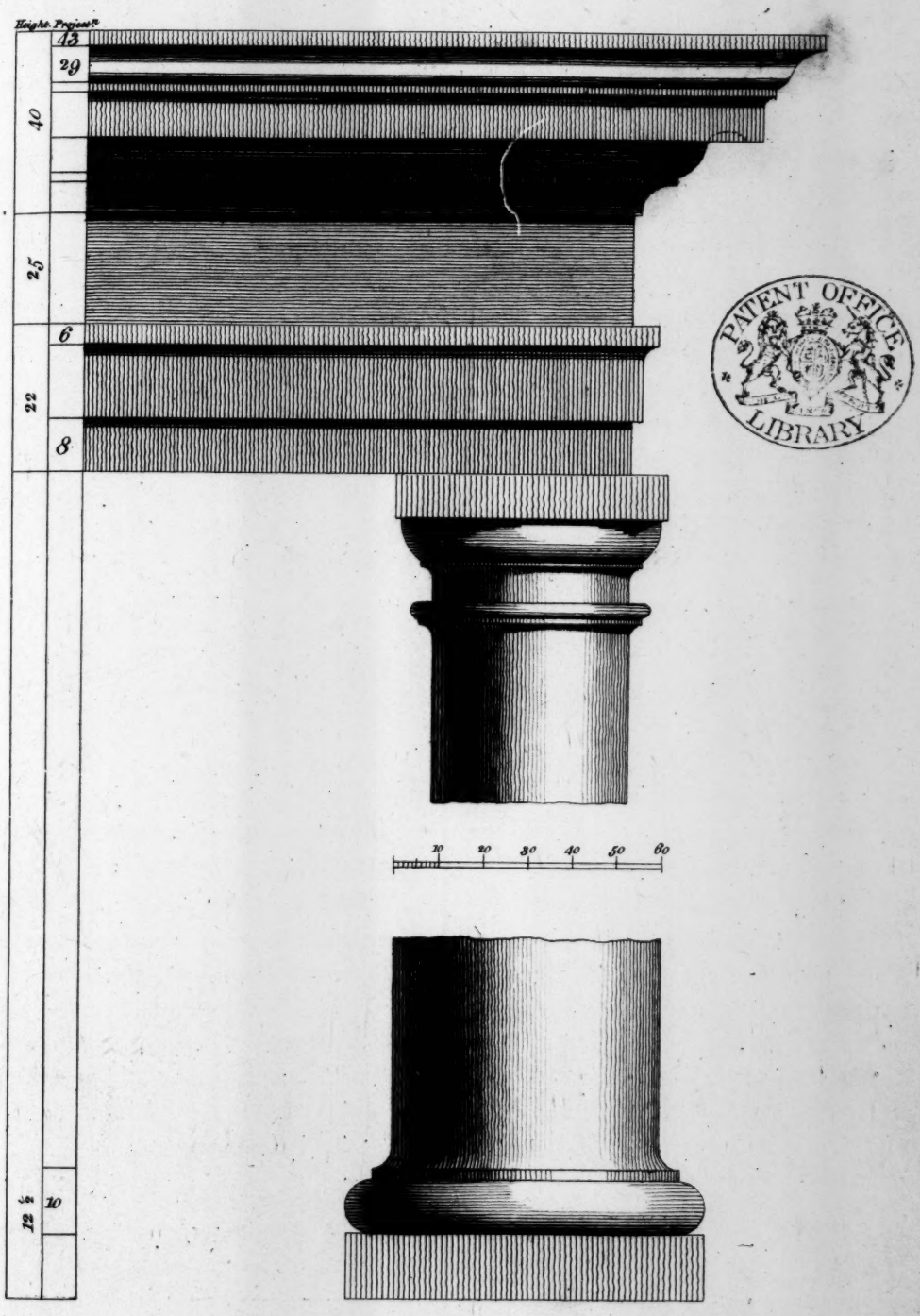
# TUSCAN.



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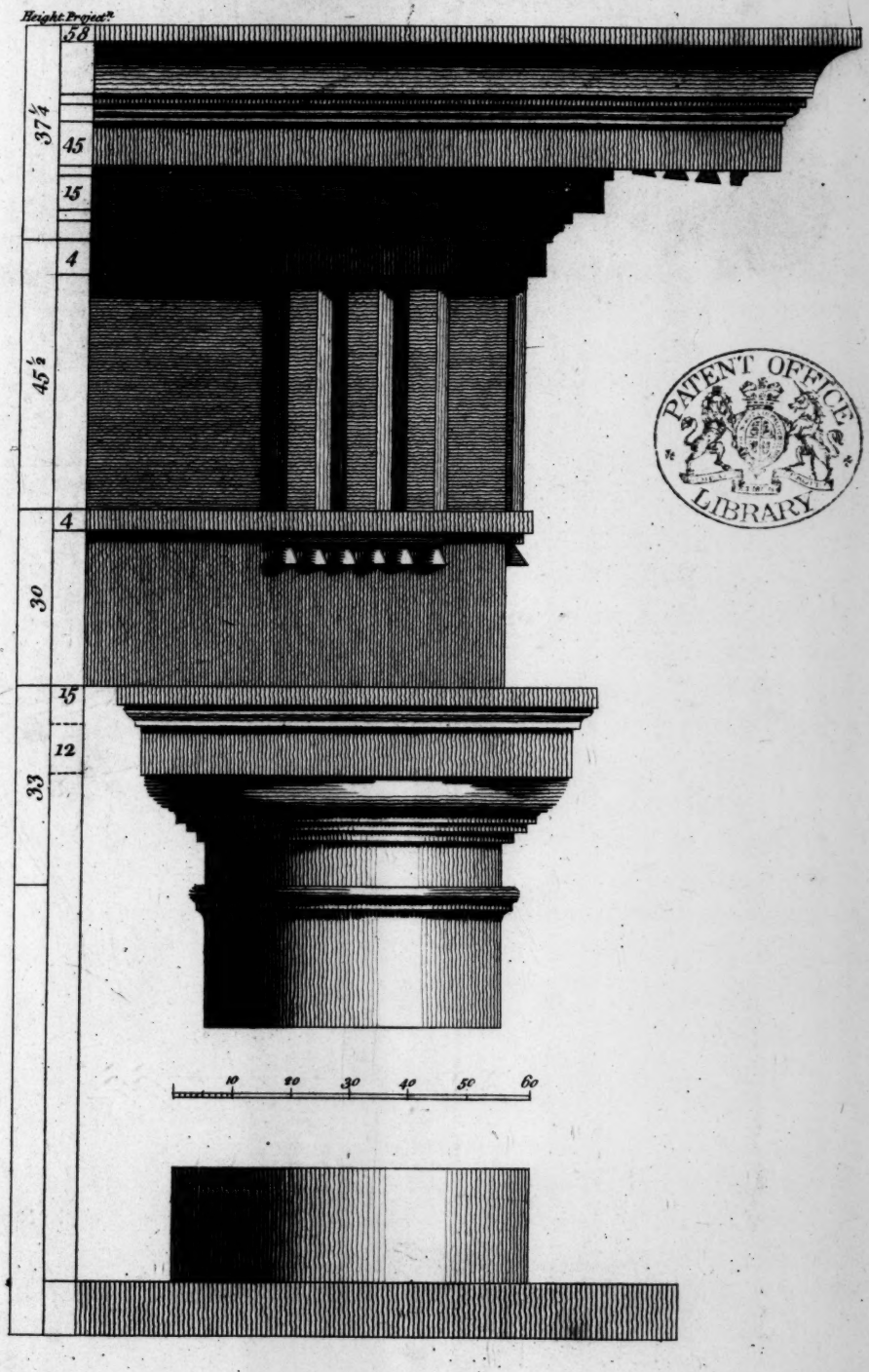


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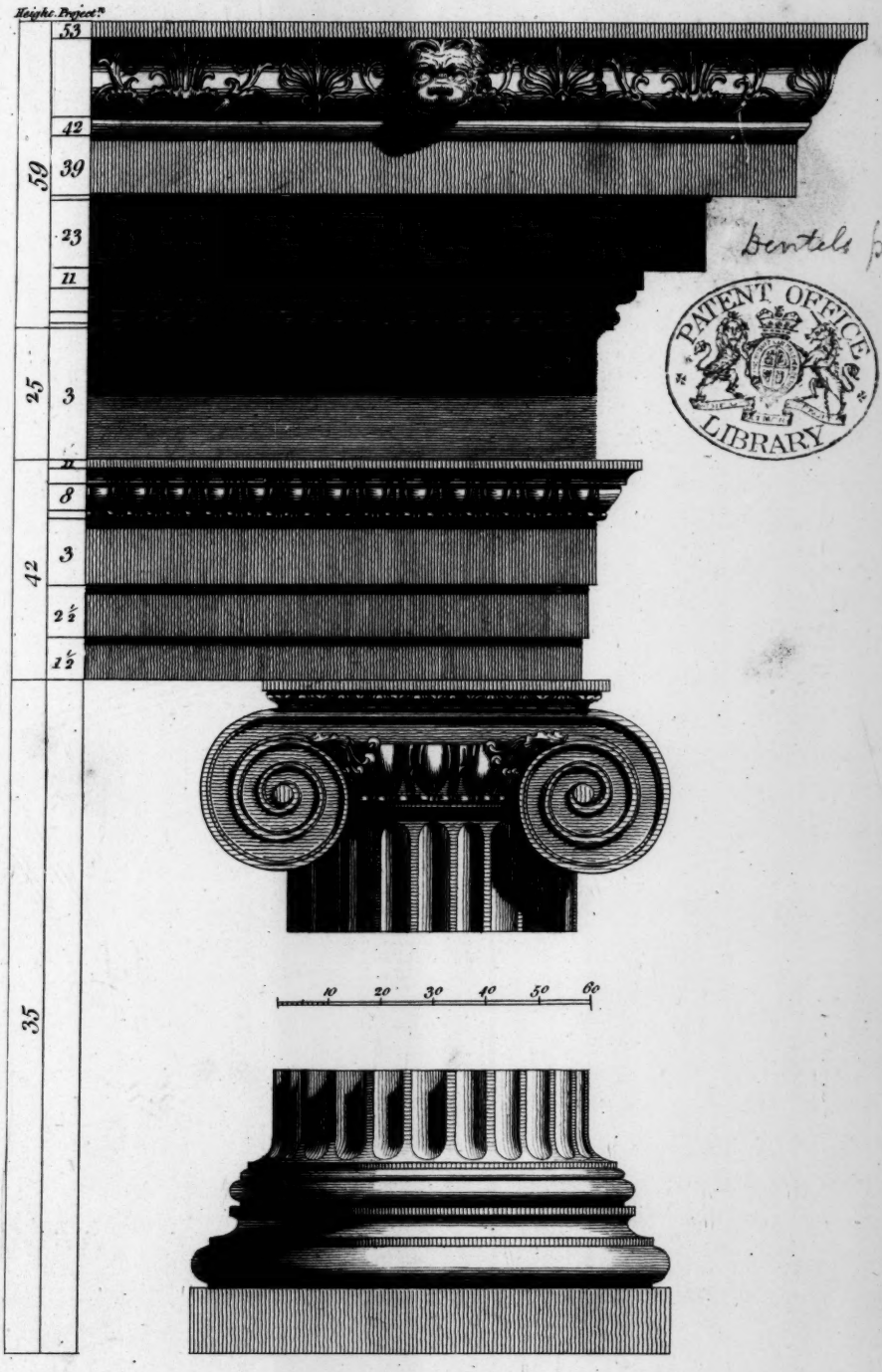


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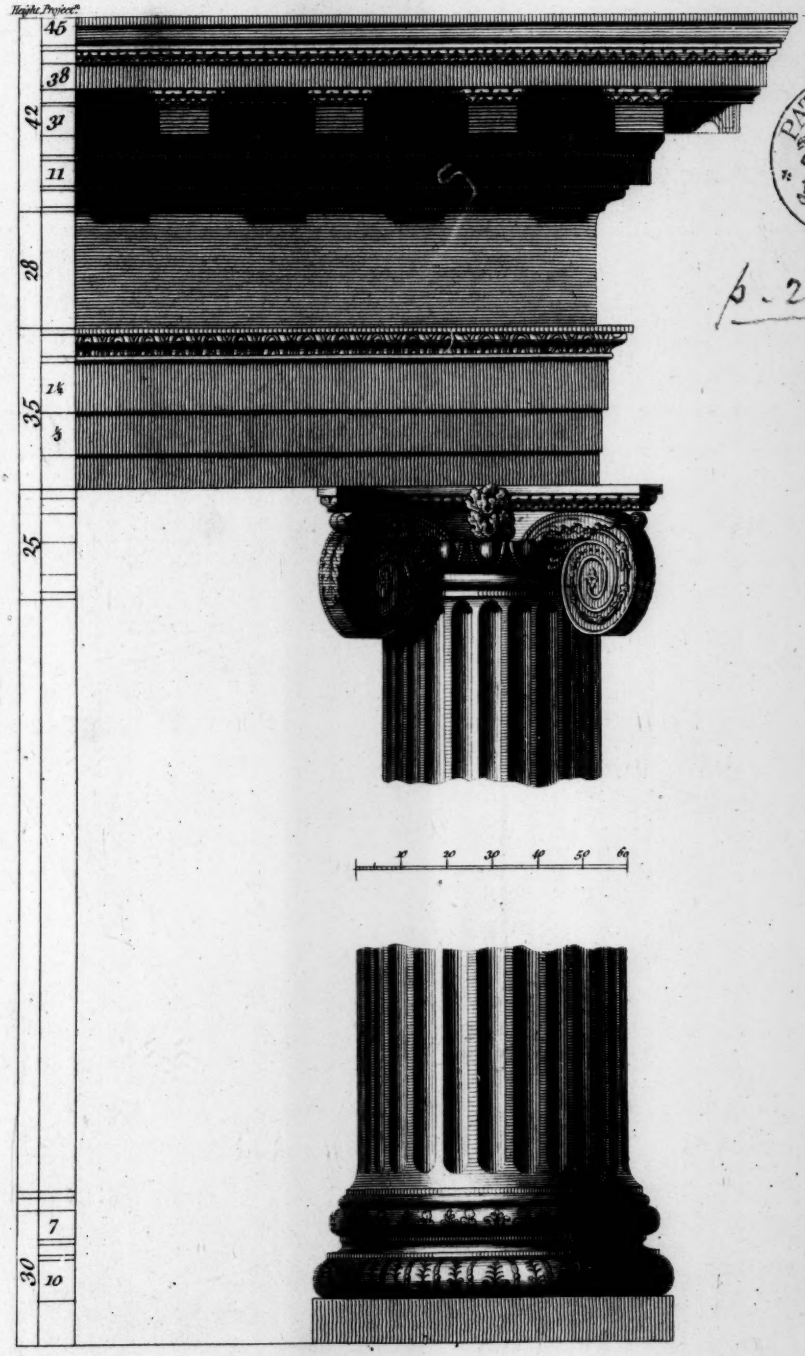


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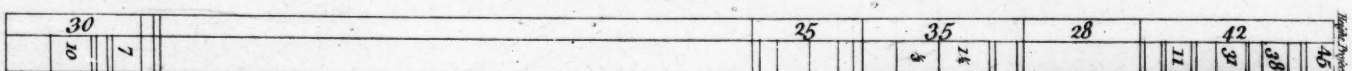

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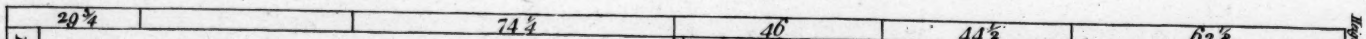

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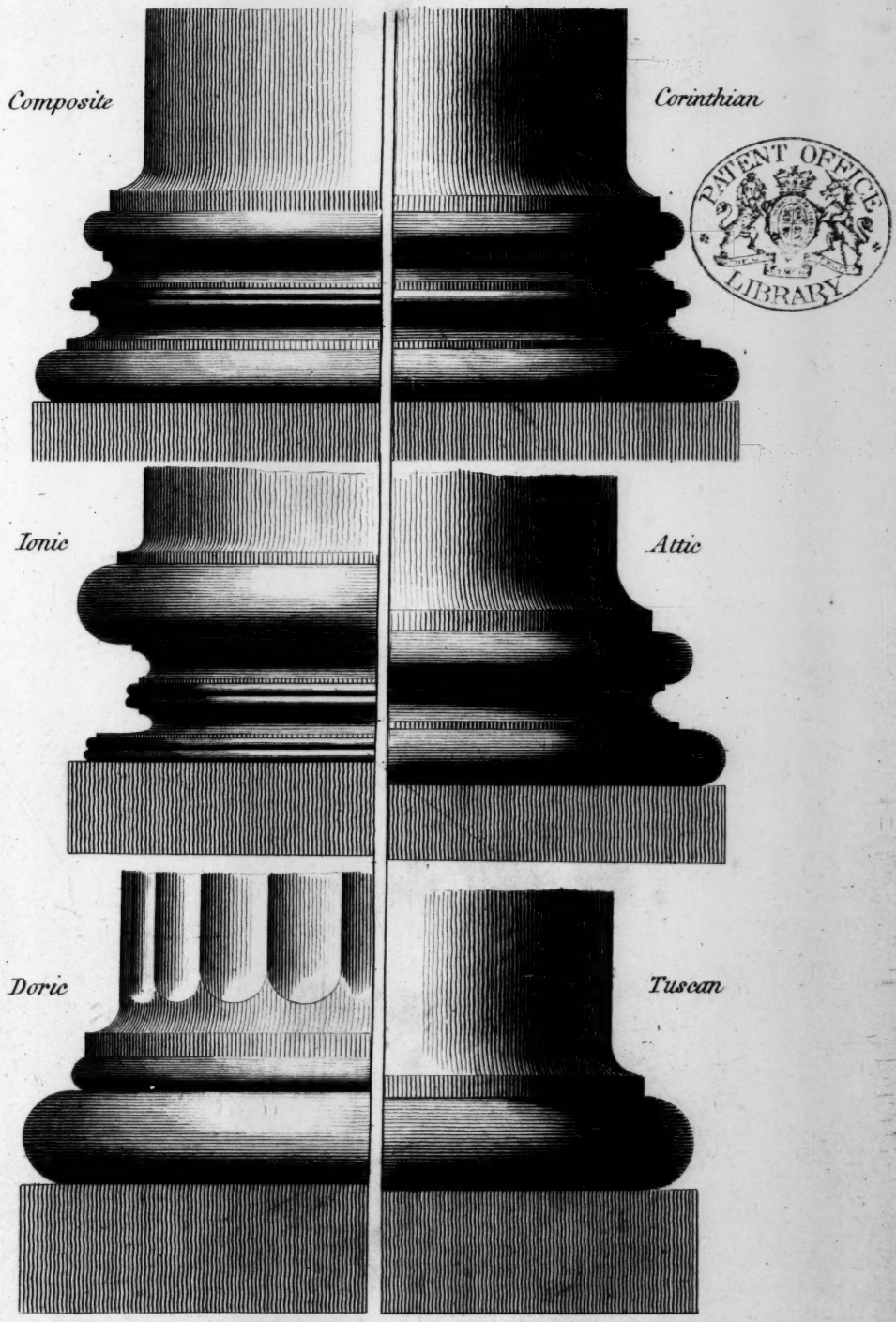


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# MOULDINGS.

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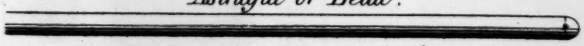
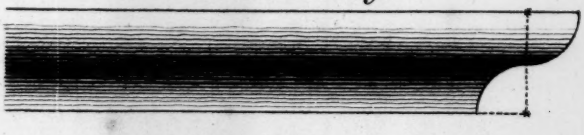
*Annulet, List or Square.*

*Astragal or Bead.*



*Cima reversa or Ogee.*



*Cima recta.*

*Cavetto or hollow.*

*Ovolo or Quarter round.*

*Scotia.*

*Torus.*

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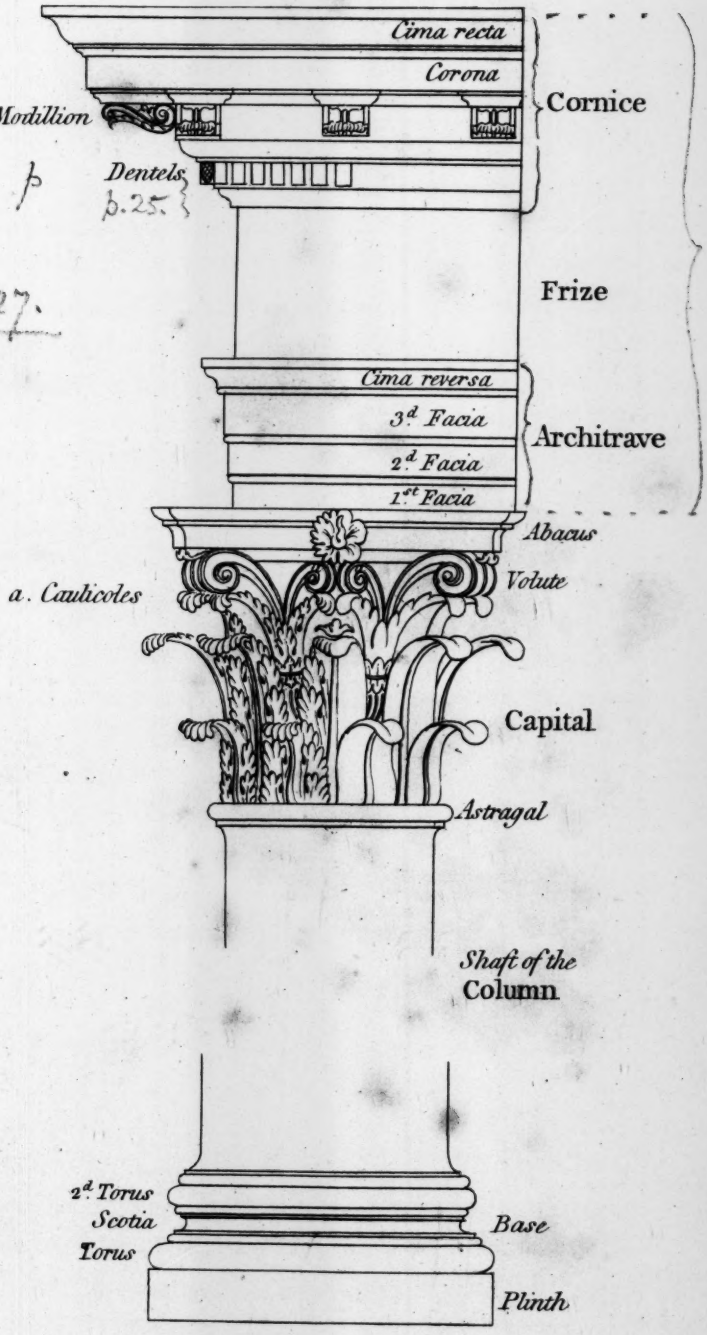


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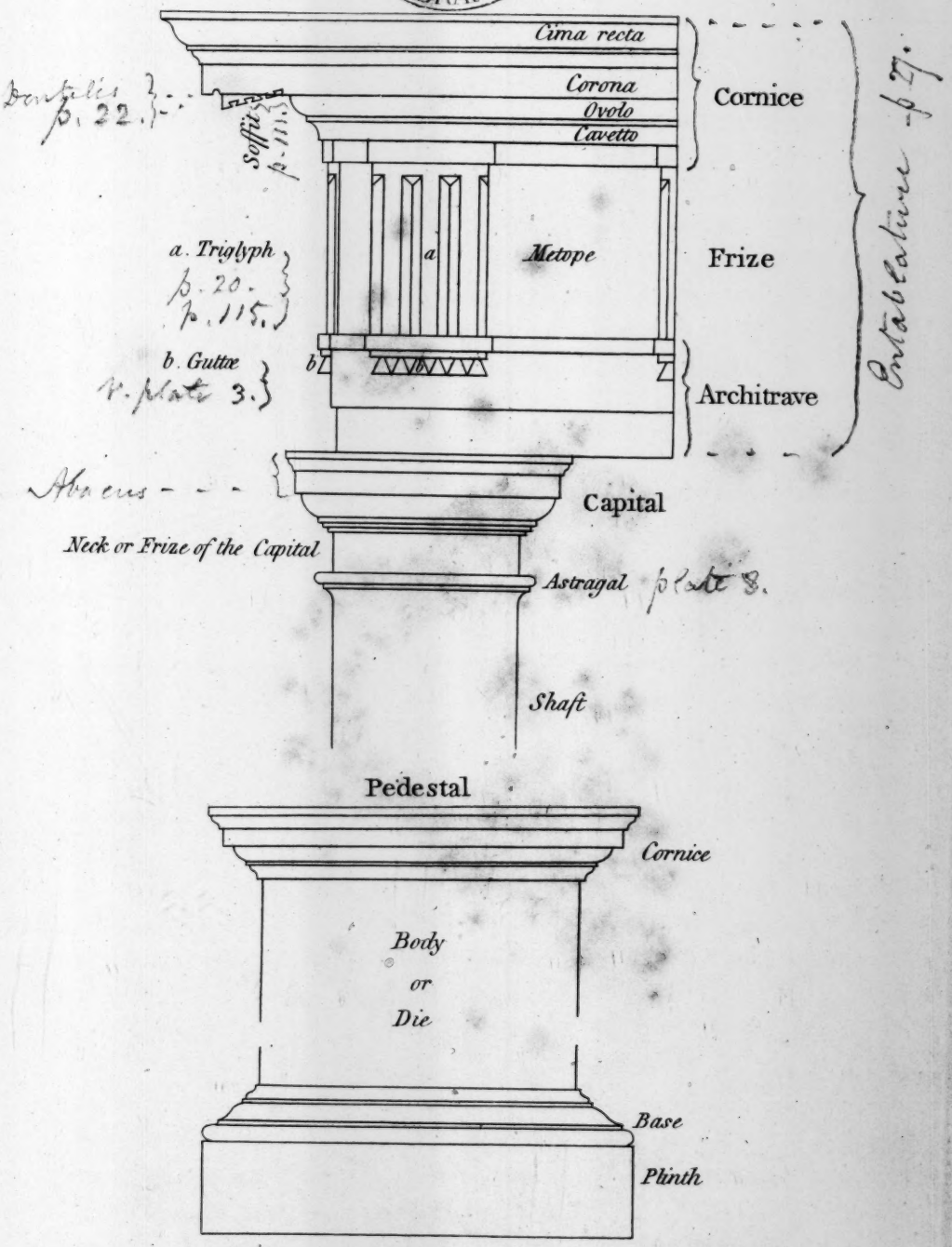


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